MATHEMATICS

QUESTION BANK

for

Summative Assessment - II

CLASS – VII

2016 – 17

CHAPTER WISE COVERAGE IN THE FORM
MCQ WORKSHEETS AND PRACTICE QUESTIONSS

Prepared by

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Kendriya Vidyalaya GaCHiBOWLI
It gives me great pleasure in presenting the Question Bank for Summative Assessment (SA) - II. It is in accordance with the syllabus of the session 2016–17 for second term (CCE pattern).

Each chapter has a large number of multiple-choice questions in the form of Worksheets, which will help students quickly test their knowledge and skill.

A sufficient number of short answer type and long answer type questions are included in the form of PRACTICE QUESTIONS. This Question Bank is also helpful to all the teachers for internal assessment of the students.

Keeping the mind the mental level of a child, every effort has been made to introduce simple multiple choice questions so that the child solve them easily and gets confidence.

I avail this opportunity to convey my sincere thanks to respected sir, Shri U. N. Khaware, Additional Commissioner(Acad), KVS Headquarter, New Delhi, respected sir, Shri S. Vijay Kumar, Joint Commissioner(Admin), KVS Headquarter, New Delhi, respected sir Shri P. V. Sairanga Rao, Deputy Commissioner(Acad), KVS Headquarter, New Delhi, respected sir Shri. D. Manivannan, Deputy Commissioner, KVS RO Hyderabad, respected sir Shri Isampal, Deputy Commissioner, KVS RO Bhopal, respected sir Shri Jagdish Mohan Rawat, Director, KVS ZIET Chandigarh, respected sir Shri P. Deva Kumar, Deputy Commissioner, KVS RO Bangalore, respected sir Shri Nagendra Goyal, Deputy Commissioner, KVS RO Ranchi, respected sir Shri Y. Arun Kumar, Deputy Commissioner, KVS RO Agra, respected sir Shri Sirimala Sambanna, Assistant Commissioner, KVS RO Hyderabad, respected sir. K. L. Nagaraju, Retd-AC, KVS RO Bangalore and respected sir Shri M.K. Kulshreshtha, Retd-AC, KVS RO Chandigarh for their blessings, motivation and encouragement in bringing out this project in such an excellent form.

I also extend my special thanks to respected sir Shri. P. S. Raju, Principal, KV Gachibowli, respected madam Smt. Nirmala Kumari M., Principal, KV Mysore & respected sir Shri. M. Vishwanatham, Principal, KV Raichur for their kind suggestions and motivation while preparing this Question Bank. I would like to place on record my thanks to respected sir Shri. P. K. Chandran, Principal, presently working in KV Bambolim. I have started my career in KVS under his guidance, suggestions and motivation.

Inspite of my best efforts to make this notes error free, some errors might have gone unnoticed. I shall be grateful to the students and teacher if the same are brought to my notice. You may send your valuable suggestions, feedback or queries through email to kumarsir34@gmail.com that would be verified by me and the corrections would be incorporated in the next year Question Bank.

M. S. KUMARSWAMY

Prepared by: M. S. KumarSwamy, TGT(Maths)
Dear Shri M.S.Kumarswamy,

It has been brought to my notice the good work done by you with regard to making question bank and worksheets for classes VI to X in Mathematics. I am pleased to look at your good work. Mathematics is one discipline which unfortunately and wrongly perceived as a phobia. May be lack of motivation from teachers and inadequate study habits of students is responsible for this state of affairs. Your work in this regard assumes a great significance. I hope your own students as well as students of other Vidyalayas will benefit by your venture. You may mail the material to all the Kendriya Vidyalayas of the region for their benefit. Keep up the good work.

May God bless!

Yours sincerely,

Shri M.S.Kumarswamy
TGT (Maths)
Kendriya Vidyalaya
Donimalai

Copy to: the principals, Kendriya Vidyalayas, Bangalore Region with instructions to make use of the materials prepared by Mr. M.S.Kumarswamy being forwarded separately.
DEDICATED

TO

MY FATHER

LATE SHRI. M. S. MALLAYYA

Prepared by: M. S. KumarSwamy, TGT(Maths)
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MCQ WORKSHEET I
CLASS VII: CHAPTER - 7
CONGRUENCE OF TRIANGLES

1. Two angles are congruent if they have
   (a) same name          (b) Equal measures   (c) Unequal measures (d) None of these

2. Which of the following is not a congruence criterion?
   (a) SSS              (b) SAS         (c) ASA             (d) None of these

3. If \( \Delta ABC \cong \Delta PQR \), then \( AB \) is equal to –
   (a) QR        (b) PQ       (c) PR        (d) None of these

4. In \( \Delta ABC \) and \( \Delta PQR \), \( AB=4\text{cm}, BC=5\text{cm}, AC=6\text{cm} \) and \( PQ=4\text{cm}, QR=5\text{cm}, PR=6\text{cm} \), then
which of the following is true?
   (a) \( \Delta ABC \cong \Delta QRP \)        (b) \( \Delta ABC \cong \Delta PQR \)
   (c) \( \Delta ABC \cong \Delta PRQ \)        (d) \( \Delta ABC \cong \Delta QPR \)

5. If \( \Delta DEF \cong \Delta ABC \), then the part of \( \Delta ABC \) that correspond to \( \angle E \) is
   (a) \( \angle A \)        (b) \( \angle B \)   (c) \( \angle C \)        (d) none of these

6. If \( \Delta DEF \cong \Delta ACB \), then the part of \( \Delta ACB \) that correspond to \( \angle F \) is
   (a) \( \angle A \)        (b) \( \angle B \)   (c) \( \angle C \)        (d) none of these

7. \( \Delta ABC \) and \( \Delta PQR \) are congruent under the correspondence: \( ABC \leftrightarrow RQP \), then the part of \( \Delta ABC \)
   that correspond to \( \angle P \) is
   (a) \( \angle A \)        (b) \( \angle B \)   (c) \( \angle C \)        (d) none of these

8. \( \Delta ABC \) and \( \Delta PQR \) are congruent under the correspondence: \( ABC \leftrightarrow RQP \), then the part of \( \Delta ABC \)
   that correspond to \( \angle Q \) is
   (a) \( \angle A \)        (b) \( \angle B \)   (c) \( \angle C \)        (d) none of these

9. \( \Delta ABC \) and \( \Delta PQR \) are congruent under the correspondence: \( ABC \leftrightarrow RPQ \), then the part of \( \Delta ABC \)
   that correspond to \( \overline{PQ} \) is
   (a) \( AB \)          (b) \( BC \)       (c) \( CA \)        (d) none of these

10. \( \Delta ABC \) and \( \Delta PQR \) are congruent under the correspondence: \( BCA \leftrightarrow RPQ \), then the part of \( \Delta ABC \)
    that correspond to \( \overline{PQ} \) is
    (a) \( AB \)          (b) \( BC \)       (c) \( CA \)        (d) none of these

11. \( \Delta ABC \) and \( \Delta PQR \) are congruent under the correspondence: \( BAC \leftrightarrow RPQ \), then the part of \( \Delta ABC \)
    that correspond to \( \overline{PR} \) is
    (a) \( AB \)          (b) \( BC \)       (c) \( CA \)        (d) none of these

12. What is the side included between the angles A and B in \( \Delta ABC \)?
    (a) \( AB \)          (b) \( BC \)       (c) \( CA \)        (d) none of these

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MCQ WORKSHEET-II
CLASS VII: CHAPTER - 7
CONGRUENCE OF TRIANGLES

1. In the below quadrilateral ABCD, AD = BC and ∠DAB = ∠CBA. If ΔABD ≅ ΔBAC. The relation between ∠ABD and ∠BAC is
   (a) ∠ABD > ∠BAC  (b) ∠ABD < ∠BAC
   (c) ∠ABD = ∠BAC  (d) ∠ABD = \frac{1}{2} ∠BAC

2. In the above sided quadrilateral ABCD, AC = AD and AB bisect ∠A and ΔABC ≅ ΔABD. The relation between BC and BD is
   (a) BC > BD  (b) BC < BD  (c) BC = BD  (d) BC = \frac{1}{2} BD

3. In the below fig. AC and BD are equal perpendicular to line segment AB. If ΔBOC ≅ ΔAOD, then the relation between OC and OD is
   (a) OD > OC  (b) OD < OC  (c) OD = OC  (d) OD = \frac{1}{2} OC

4. In the above sided fig. AB = AC and BF = CD. If ΔACD ≅ ΔABE then AD =
   (a) AC  (b) AE  (c) AB  (d) none of these

5. ΔABC is right triangle in which ∠A = 90° and AB = AC. The values of ∠B and ∠D will be
   (a) ∠B = ∠C = 60°  (b) ∠B = ∠C = 30°
   (c) ∠B = ∠C = 45°  (d) ∠B = ∠C = 50°

6. The measure of each angle of an equilateral triangle is:
   (a) 60°  (b) 30°  (c) 45°  (d) 40°
7. If the vertical angle of an isosceles triangle is 40° then measure of other two angles will be
   (a) 60°, 60°    (b) 70°, 70°  (c) 50°, 50°  (d) 75°, 75°

8. If ∠A, ∠B and ∠C of ΔABC are equal then triangle is:
   (a) Equilateral    (b) Isosceles    (c) Scalene    (d) none of these.

9. Which one of the following is the value of congruency?
   (a) SAS   (b) ASS   (c) SSA   (d) none of these

10. By which congruence rule following triangles are congruent?
    (a) SAS  (b) RHS  (c) ASA  (d) SSS

11. In the above sided Fig, AC = BD and AD = BC. Which of the following statements is meaningfully written?
    a) ΔABC ≅ ΔABD   b) ΔABC ≅ ΔBDA.  c) ΔABC ≅ ΔBAD  d) ΔABC ≅ ΔADB

12. What is the angle included between the sides PN and PM of ΔMNP?
    (a) ∠N  (b) ∠P  (c) ∠M  (d) none of these
MCQ WORKSHEET-III
CLASS VII: CHAPTER - 7
CONGRUENCE OF TRIANGLES

1. In triangles ABC and PQR, AB = 3.5 cm, BC = 7.1 cm, AC = 5 cm, PQ = 7.1 cm, QR = 5 cm and PR = 3.5 cm, then which of the following is true
   a) \( \triangle ABC \cong \triangle QRP \)
   c) \( \triangle ABC \cong \triangle PQR \)
   d) \( \triangle ABC \cong \triangle QPR \)

2. In triangles ABC and DEF, AB = 7 cm, BC = 5 cm, \( \angle B = 50^\circ \) DE = 5 cm, EF = 7 cm, \( \angle E = 50^\circ \) By which congruence rule the triangles are congruent?
   (a) SAS  (b) RHS  (c) ASA  (d) SSS

3. In the below Fig, AB = AC and AD is the bisector of \( \angle BAC \), then the relation between \( \angle B \) and \( \angle C \)
   (a) \( \angle B > \angle C \)
   (b) \( \angle ABD < \angle C \)
   (c) \( \angle B = \angle C \)
   (d) \( \angle ABD = \frac{1}{2} \angle C \)

4. In the above-sided figure, complete the congruence statement: \( \triangle BCA \cong ? \)
   (a) \( \triangle BTA \)
   (b) \( \triangle BAT \)
   (c) \( \triangle TAB \)
   (d) \( \triangle ATB \)

5. What is the side included between the angles M and N of \( \triangle MNP \)?
   (a) MN  (b) NP  (c) PM  (d) none of these

6. In triangles DEF and PQR, \( \angle D = 60^\circ \), \( \angle F = 80^\circ \), DF = 5 cm, \( \angle Q = 60^\circ \), \( \angle R = 80^\circ \), QR = 5 cm. By which congruence rule the triangles are congruent?
   (a) SAS  (b) RHS  (c) ASS  (d) none of these

7. In triangles ABC and DEF, BC = 6 cm, AC = 4 cm, \( \angle B = 35^\circ \) DF = 4 cm, EF = 6 cm, \( \angle E = 35^\circ \). By which congruence rule the triangles are congruent?
   (a) SAS  (b) RHS  (c) ASS  (d) none of these

8. What is the angle included between the sides MN and NP of \( \triangle MNP \)?
   (a) \( \angle N \)
   (b) \( \angle P \)
   (c) \( \angle M \)
   (d) none of these

9. Two line segments are congruent if they have
   a) same name  b) Equal measures  c) Unequal measures  d) None of these
10. What is the side included between the angles A and C of \( \Delta ABC \)?
   (a) AB     (b) BC     (c) CA     (d) none of these

11. In the below figure, complete the congruence statement: \( \Delta QRS \cong ? \)
   (a) \( \Delta PQT \)  (b) \( \Delta TPQ \)  (c) \( \Delta TQP \)  (d) none of these

12. If \( \Delta ABC \) and \( \Delta PQR \) are to be congruent, name one additional pair of corresponding parts.
   (a) \( AB = PQ \)  (b) \( \angle A = \angle P \)  (c) \( BC = QR \)  (d) none of these
MCQ WORKSHEET-IV
CLASS VII: CHAPTER - 7
CONGRUENCE OF TRIANGLES

1. By which congruence rule following triangles are congruent?
   (a) SAS  (b) RHS  (c) ASA  (d) SSS

2. In the below figure, by which congruence rule the following triangles are congruent?
   (a) SAS  (b) RHS  (c) ASA  (d) SSS

3. In the above sided Fig, BD and CE are altitudes of \( \Delta ABC \) such that BD = CE then by which congruence rule \( \Delta CBD \cong \Delta BCE \)?
   (a) SAS  (b) RHS  (c) ASA  (d) SSS

4. It is to be established by RHS congruence rule that \( \Delta ABC \cong \Delta RPQ \). What additional information is needed, if it is given that \( \angle B = \angle P = 90^\circ \) and AB = RP?
   (a) AC = RQ  (b) \( \angle A = \angle P \)  (c) BC = QR  (d) none of these

5. If ABC and DEF are congruent triangles such that \( \angle A = 47^\circ \) and \( \angle E = 83^\circ \), then \( \angle C = \)
   (a) 50\(^\circ\)  (b) 60\(^\circ\)  (c) 70\(^\circ\)  (d) 80\(^\circ\)

6. In congruent triangles ABC and DEF, \( \angle A = \angle E = 40^\circ \), and \( \angle F = 65^\circ \), then \( \angle B = \)
   (a) 35\(^\circ\)  (b) 65\(^\circ\)  (c) 75\(^\circ\)  (d) 85\(^\circ\)

7. In the below figure, if EF = QR then the congruence rule used for the congruency of the given triangles is
   (a) AAA  (b) SSS  (c) SAS  (d) ASA
8. In the below figure, by which congruence rule the following triangles are congruent?
   (a) SAS  (b) RHS  (c) ASA  (d) SSS

9. In triangles ABC and PQR, ∠B = 90°, AC = 8 cm, AB = 3 cm, ∠P = 90°, PR = 3 cm, QR = 8 cm
   By which congruence rule the triangles are congruent?
   (a) SAS  (b) RHS  (c) ASS  (d) none of these

10. In triangles DEF and PQR, ∠E = 80°, ∠F = 30°, EF = 5 cm, ∠P = 80°, PQ = 5 cm, ∠R = 30°, By
    which congruence rule the triangles are congruent?
    (a) SAS  (b) RHS  (c) ASS  (d) none of these

11. In the below figure, by which congruence rule the following triangles are congruent?
    (a) SAS  (b) RHS  (c) ASA  (d) SSS

12. You want to establish ΔDEF ≅ ΔMNP, using the ASA congruence rule. You are given that ∠D = ∠M and ∠F = ∠P. What information is needed to establish the congruence?
    (a) DF = MP  (b) ∠E = ∠N  (c) DE = MN  (d) none of these
PRACTICE QUESTIONS
CLASS VII: CHAPTER - 7
CONGRUENCE OF TRIANGLES

1. \( \triangle ABC \) and \( \triangle PQR \) are congruent under the correspondence: \( ABC \leftrightarrow RQP. \) Write the parts of \( \triangle ABC \) that correspond to (i) \( \angle P \) (ii) \( \angle Q \) (iii) \( \overline{RP} \)

2. Complete the following statements:
   (a) Two line segments are congruent if ______________.
   (b) Among two congruent angles, one has a measure of 70\(^\circ\); the measure of the other angle is ____________.
   (c) When we write \( \angle A = \angle B, \) we actually mean ____________.

3. If \( \triangle ABC \cong \triangle FED \) under the correspondence \( ABC \leftrightarrow FED, \) write all the corresponding congruent parts of the triangles.

4. If \( \triangle DEF \cong \triangle BCA \), write the part(s) of \( BCA \) that correspond to (i) \( \angle E \) (ii) \( EF \) (iii) \( \angle F \) (iv) \( DF \)

5. In triangles \( ABC \) and \( PQR, \) \( AB = 3.5 \text{ cm}, \) \( BC = 7.1 \text{ cm}, \) \( AC = 5 \text{ cm}, \) \( PQ = 7.1 \text{ cm}, \) \( QR = 5 \text{ cm} \) and \( PR = 3.5 \text{ cm}. \) Examine whether the two triangles are congruent or not. If yes, write the congruence relation in symbolic form.

6. In Fig \( AD = CD \) and \( AB = CB. \)
   (i) State the three pairs of equal parts in \( \triangle ABD \) and \( \triangle CBD. \)
   (ii) Is \( \triangle ABD \cong \triangle CBD? \) Why or why not?
   (iii) Does \( BD \) bisect \( \angle ABC? \) Give reasons.

7. Explain, why \( \triangle ABC \cong \triangle FED \) (see below figure).

8. In the above sided Fig, \( AB = AC \) and \( D \) is the mid-point of \( BC \)
   (i) State the three pairs of equal parts in \( \triangle ADB \) and \( \triangle ADC. \)
   (ii) Is \( \triangle ADB \cong \triangle ADC? \) Give reasons.
   (iii) Is \( \angle B = \angle C? \) Why?

9. Which angle is included between the sides \( DE \) and \( EF \) of \( \triangle DEF? \)

10. By applying ASA congruence rule, it is to be established that \( \triangle ABC \cong \triangle QRP \) and it is given that \( BC = RP. \) What additional information is needed to establish the congruence?
11. In Fig, AC = BD and AD = BC. Which of the following statements is meaningfully written? 
   (i) ΔABC ≅ ΔABD (ii) ΔABC ≅ ΔBAD.

12. In the above sided Fig, AB = AC and AD is the bisector of ∠BAC. 
   (i) State three pairs of equal parts in triangles ADB and ADC. 
   (ii) Is ΔADB ≅ ΔADC? Give reasons. 
   (iii) Is ∠B = ∠C? Give reasons.

13. In the below Fig, AB and CD bisect each other at O. 
   (i) Which of the following statements are true? 
   (a) ΔAOC ≅ ΔDOB (b) ΔAOC ≅ ΔBOD

14. In the above sided Fig, ray AZ bisects ∠DAB as well as ∠DCB. 
   (i) State the three pairs of equal parts in triangles BAC and DAC. 
   (ii) Is ΔBAC ≅ ΔDAC? Give reasons. 
   (iii) Is AB = AD? Justify your answer. 
   (iv) Is CD = CB? Give reasons.

15. In Fig, DA ⊥ AB, CB ⊥ AB and AC = BD. State the three pairs of equal parts in ΔABC and 
    ΔDAB. Which of the following statements is meaningful? 
    (i) ΔABC ≅ ΔBAD (ii) ΔABC ≅ ΔABD

16. In the above sided Fig, BD and CE are altitudes of ΔABC such that BD = CE. 
   (i) State the three pairs of equal parts in ΔCBD and ΔBCE. 
   (ii) Is ΔCBD ≅ ΔBCE? Why or why not? 
   (iii) Is ∠DCB = ∠EBC? Why or why not?
17. ABC is an isosceles triangle with AB = AC and AD is one of its altitudes.
   (i) State the three pairs of equal parts in $\triangle ADB$ and $\triangle ADC$.
   (ii) Is $\triangle ADB \cong \triangle ADC$? Why or why not?
   (iii) Is $\angle B = \angle C$? Why or why not?
   (iv) Is BD = CD? Why or why not?

18. In $\triangle ABC$, $\angle A = 30^\circ$, $\angle B = 40^\circ$ and $\angle C = 110^\circ$ and in $\triangle PQR$, $\angle P = 30^\circ$, $\angle Q = 40^\circ$ and $\angle R = 110^\circ$. A student says that $\triangle ABC \cong \triangle PQR$ by AAA congruence criterion. Is he justified? Why or why not?

19. Complete the congruence statement:
   
   $\triangle ABC \cong \ ?$
   
   $\triangle QRS \cong \ ?$

20. If $\triangle ABC$ and $\triangle PQR$ are to be congruent, name one additional pair of corresponding parts. What criterion did you use?
MCQ WORKSHEET-1
CLASS VII: CHAPTER - 8
COMPARING QUANTITIES

1. Find the ratio of 3 km to 300 m.
   a) 10 : 1    b) 1 : 10    c) 1 : 5    d) none of these

2. A map is given with a scale of 2 cm = 1000 km. What is the actual distance between the two places in kms, if the distance in the map is 2.5 cm?
   a) 1250 km    b) 1500 km    c) 2500 km    d) none of these

3. 6 bowls cost Rs 90. What would be the cost of 10 such bowls?
   a) Rs 300    b) Rs 150    c) Rs 200    d) Rs 250

4. The car that I own can go 150 km with 25 litres of petrol. How far can it go with 30 litres of petrol?
   a) 125 km    b) 150 km    c) 250 km    d) none of these

5. The ratio of 90 cm to 1.5 m is
   a) 2 : 5    b) 3 : 5    c) 4 : 5    d) none of these

6. A picnic is being planned in a school for Class VII. Girls are 60% of the total number of students and are 18 in number. The ratio of the number of girls to the number of boys in the class is
   a) 2 : 3    b) 3 : 2    c) 4 : 5    d) none of these

7. Find the ratio of Speed of a cycle 15 km per hour to the speed of scooter 30 km per hour.
   a) 2 : 1    b) 1 : 2    c) 4 : 5    d) none of these

8. Find the ratio of 5 m to 10 km
   a) 2000 : 1    b) 1 : 2000    c) 1 : 2    d) none of these

9. Find the ratio of 50 paise to Rs 5
   a) 10 : 1    b) 1 : 10    c) 1 : 5    d) none of these

10. 72% of 25 students are good in hindi, how many are not good in hindi?
    a) 16    b) 14    c) 18    d) 7

11. In a computer lab, there are 3 computers for every 6 students. How many computers will be needed for 24 students?
    a) 12    b) 14    c) 16    d) none of these

12. Out of 32 students, 8 are absent. What percent of the students are present?
    a) 75%    b) 64%    c) 60%    d) none of these

13. There are 25 radios, 16 of them are out of order. What percent of radios are out of order?
    a) 75%    b) 64%    c) 60%    d) none of these

14. A shop has 500 parts, out of which 5 are defective. What percent are not defective?
    a) 75%    b) 99%    c) 90%    d) none of these

15. There are 120 voters, 90 of them voted yes. What percent voted yes?
    a) 75%    b) 99%    c) 90%    d) none of these
MCQ WORKSHEET-II
CLASS VII: CHAPTER - 8
COMPARING QUANTITIES

1. A survey of 40 children showed that 25% liked playing football. How many children not liked playing football?
   a) 90       b) 60       c) 30       d) none of these

2. 8% children of a class of 25 like getting wet in the rain. How many children do not like getting wet in the rain.
   a) 20       b) 22       c) 23       d) none of these

3. Rahul bought a sweater and saved Rs 20 when a discount of 25% was given. What was the price of the sweater before the discount?
   a) Rs 30     b) Rs 40     c) Rs 60     d) Rs 80

4. Out of 15,000 voters in a constituency, 60% voted. Find the number of voters who did not vote.
   a) 9000     b) 6000     c) 3000     d) none of these

5. Meeta saves Rs 400 from her salary. If this is 10% of her salary. What is her salary?
   a) 4000     b) 6000     c) 3000     d) none of these

6. A local cricket team played 20 matches in one season. It won 25% of them. How many matches did they lose?
   a) 12       b) 14       c) 16       d) none of these

7. A school team won 6 games this year against 4 games won last year. What is the per cent increase?
   a) 75%     b) 50%     c) 60%     d) none of these

8. The number of illiterate persons in a country decreased from 150 lakhs to 100 lakhs in 10 years. What is the percentage of decrease?
   a) 30%     b) 50%     c) 33\frac{1}{3} %     d) none of these

9. Cost of an item is Rs 50. It was sold with a profit of 12%. Find the selling price.
   a) Rs 56     b) Rs 60     c) Rs 70     d) none of these

10. How much will an item cost if 10% discount is given on the marked price Rs 100
    a) 90       b) 110      c) 95       d) 85

11. A football team won 10 matches out of the total number of matches they played. If their win percentage was 40, then how many matches did they play in all?
    a) 10       b) 25       c) 40       d) none of these

12. If Chameli had Rs 600 left after spending 75% of her money, how much did she have in the beginning?
    a) Rs 3000  b) Rs 2400  c) Rs 2600  d) Rs 2800

Prepared by: M. S. KumarSwamy, TGT(Maths)
1. The price of a scooter was Rs 34,000 last year. It has increased by 20% this year. What is the price now?
   a) Rs 40800  
   b) Rs 32300  
   c) Rs 40000  
   d) none of these

2. The price of a scooter was Rs 34,000 last year. It has decreased by 5% this year. What is the price now?
   a) Rs 40800  
   b) Rs 32300  
   c) Rs 40000  
   d) none of these

3. Mohit bought a CD for Rs. 750 and sold it Rs. 875. Find his gain or loss percent.
   a) 5%  
   b) 16%  
   c) 6%  
   d) $16\frac{2}{3}$%

4. Rahul purchased a table for Rs. Rs 1260 and due to some scratches on its top he had to sell it for Rs. 1197. Find his loss or gain percent.
   a) 5%  
   b) 4%  
   c) 6%  
   d) $16\frac{2}{3}$%

5. Raghu bought an almirah for Rs. 6250 and spent Rs. 375 on its repairs. Then he sold it for Rs. Rs. 6890. Find his gain or loss percent.
   a) 5%  
   b) 4%  
   c) 6%  
   d) $16\frac{2}{3}$%

6. A vendor bought oranges at Rs. 20 for Rs. 56 and sold them at Rs. 35 per dozen. Find his gain or loss percent.
   a) 5%  
   b) $4\frac{1}{6}$%  
   c) 6%  
   d) $16\frac{2}{3}$%

7. The cost of a flower vase is Rs 120. If the shopkeeper sells it at a loss of 10%, find the price at which it is sold.
   a) Rs 108  
   b) Rs 450  
   c) Rs 160  
   d) none of these

8. Selling price of a toy car is Rs 540. If the profit made by shopkeeper is 20%, what is the cost price of this toy?
   a) Rs 108  
   b) Rs 450  
   c) Rs 160  
   d) none of these

9. The marked price of a ceiling fan is Rs. 1250 and the shopkeeper allows a discount of 6% on it. Find the selling price of the fan.
   a) Rs 1180  
   b) Rs 1175  
   c) Rs 1160  
   d) none of these

10. A trader marks his goods at 40% above the cost price and allows a discount of 25%. What is his gain?
    a) Rs 118  
    b) Rs 175  
    c) Rs 105  
    d) none of these

11. A dealer purchased a washing for Rs. 7660. He allows a discount of 12% on its marked price and still gains 10%. Find the marked price of the machine.
    a) Rs 9800  
    b) Rs 9675  
    c) Rs 9575  
    d) none of these

12. On selling a fan for Rs. 810. Sunil gains 8%. For how much did he purchase it?
    a) Rs 780  
    b) Rs 750  
    c) Rs 760  
    d) none of these
MCQ WORKSHEET-IV
CLASS VII: CHAPTER - 8
COMPARING QUANTITIES

1. On selling a table for Rs. 987. Ramesh loses 6%. For how much did he purchase it?
   a) Rs 1500  b) Rs 105  c) Rs 1050  d) none of these

2. Rashmi buys a calculator for Rs. 720 and sells it at a loss of $6\frac{2}{3}$%. For how much does she sell it?
   a) Rs 700  b) Rs 650  c) Rs 672  d) none of these

3. The boys and girls in a school are in the ratio of 8 : 5. If the number of girls is 160, what is the total strength of the school?
   a) 250  b) 260  c) 356  d) 416

4. The simple interest on Rs. 5000 for 219 days at 4% per annum is
   a) Rs 126.50  b) Rs 120  c) Rs 125  d) Rs. 43.80

5. Find the simple interest on Rs. 2500 for 2 years 6 months at 6% per annum.
   a) Rs 350  b) Rs 375  c) Rs 750  d) none of these

6. What sum will amount to Rs. 4590 at 12% per annum simple interest in 3 years?
   a) Rs 3500  b) Rs 3375  c) Rs 3750  d) none of these

7. In what time will Rs. 1860 amount to Rs. 2278.50, if simple interest is calculated at 9% per annum?
   a) 2 years  b) $2 \frac{1}{2}$ years  c) 3 years  d) 4 years

8. At what rate percent per annum will Rs. 1650 amount to Rs. 2046 in 3 years?
   a) 8%  b) 4%  c) 6%  d) $16\frac{2}{3}$%

9. Simple interest on a certain sum is $\frac{16}{25}$ of the sum. Find the rate percent and the time if both are numerically equal.
   a) 6 years  b) $2 \frac{1}{2}$ years  c) 8 years  d) 4 years

10. At what rate percent per annum simple interest will a sum treble itself in 16 years?
    a) 12%  b) 12.5%  c) 15%  d) $16\frac{2}{3}$%

11. A sum of money at simple interest amounts to Rs. 696 in 2 years and Rs. 840 in 5 years. The sum is
    a) Rs 500  b) Rs 600  c) Rs 560  d) Rs. 620

Prepared by: M. S. KumarSwamy, TGT(Maths)
12. In what time will Rs. 1600 amount to Rs. 1768 at 6% per annum simple interest?
   a) $1 \frac{1}{4}$ years   b) $2 \frac{1}{2}$ years   c) $1 \frac{3}{4}$ years   d) $1 \frac{1}{2}$ years

13. A sum amounts to Rs. 3720 in 8 months at 5% per annum simple interest. The sum is
   a) Rs 3500   b) Rs 3600   c) Rs 3560   d) Rs. 3620

14. At what rate percent per annum simple interest will a sum be double itself in 8 years?
   a) 15%   b) 14%   c) 16%   d) $12 \frac{1}{2}$%

15. At simple interest a sum becomes of itself in 5 years. The rate of interest percent per annum is
   a) 8%   b) 5%   c) 10%   d) 12%
PRACTICE QUESTIONS
CLASS VII: CHAPTER - 8
COMPARING QUANTITIES

1. Find the ratio of 3 km to 300 m.

2. A map is given with a scale of 2 cm = 1000 km. What is the actual distance between the two places in kms, if the distance in the map is 2.5 cm?

3. 6 bowls cost Rs 90. What would be the cost of 10 such bowls?

4. The car that I own can go 150 km with 25 litres of petrol. How far can it go with 30 litres of petrol?

5. In a computer lab, there are 3 computers for every 6 students. How many computers will be needed for 24 students?

6. Mala has a collection of bangles. She has 20 gold bangles and 10 silver bangles. What is the percentage of bangles of each type? Put it in the tabular form?

7. Out of 25 children in a class, 15 are girls. What is the percentage of girls?

8. Convert the given decimals to per cents: (a) 0.75 (b) 0.09 (c) 0.2

9. Out of 32 students, 8 are absent. What percent of the students are absent?

10. There are 25 radios, 16 of them are out of order. What percent of radios are out of order?

11. A shop has 500 parts, out of which 5 are defective. What percent are defective?

12. There are 120 voters, 90 of them voted yes. What percent voted yes?

13. If 65% of students in a class have a bicycle, what percent of the student do not have bicycles?

14. We have a basket full of apples, oranges and mangoes. If 50% are apples, 30% are oranges, then what percent are mangoes?

15. A survey of 40 children showed that 25% liked playing football. How many children liked playing football?

16. Find: (a) 50% of 164 (b) 75% of 12 (c) $12\frac{1}{2}$% of 64

17. 8% children of a class of 25 like getting wet in the rain. How many children like getting wet in the rain.

18. Rahul bought a sweater and saved Rs 20 when a discount of 25% was given. What was the price of the sweater before the discount?

19. 9 is 25% of what number?

20. 75% of what number is 15?
21. Reena’s mother said, to make *idlis*, you must take two parts rice and one part *urad dal*. What percentage of such a mixture would be rice and what percentage would be *urad dal*?

22. If Rs 250 is to be divided amongst Ravi, Raju and Roy, so that Ravi gets two parts, Raju three parts and Roy five parts. How much money will each get? What will it be in percentages?

23. Divide 15 sweets between Manu and Sonu so that they get 20% and 80% of them respectively.

24. If angles of a triangle are in the ratio 2 : 3 : 4. Find the value of each angle.

25. A school team won 6 games this year against 4 games won last year. What is the per cent increase?

26. The number of illiterate persons in a country decreased from 150 lakhs to 100 lakhs in 10 years. What is the percentage of decrease?

27. Find Percentage of increase or decrease: – Price of shirt decreased from Rs 80 to Rs 60. – Marks in a test increased from 20 to 30.

28. My mother says, in her childhood petrol was Re 1 a litre. It is Rs 52 per litre today. By what percentage has the price gone up?

29. The cost of a flower vase is Rs 120. If the shopkeeper sells it at a loss of 10%, find the price at which it is sold.

30. Selling price of a toy car is Rs 540. If the profit made by shopkeeper is 20%, what is the cost price of this toy?

31. A shopkeeper bought a chair for Rs 375 and sold it for Rs 400. Find the gain Percentage.

32. Cost of an item is Rs 50. It was sold with a profit of 12%. Find the selling price.

33. An article was sold for Rs 250 with a profit of 5%. What was its cost price?

34. An item was sold for Rs 540 at a loss of 5%. What was its cost price?

35. Anita takes a loan of Rs 5,000 at 15% per year as rate of interest. Find the interest she has to pay at end of one year.

36. Rs 10,000 is invested at 5% interest rate p.a. Find the interest at the end of one year.

37. Rs 3,500 is given at 7% p.a. rate of interest. Find the interest which will be received at the end of two years.

38. Rs 6,050 is borrowed at 6.5% rate of interest p.a.. Find the interest and the amount to be paid at the end of 3 years.

39. Rs 7,000 is borrowed at 3.5% rate of interest p.a. borrowed for 2 years. Find the amount to be paid at the end of the second year.

40. If Manohar pays an interest of Rs 750 for 2 years on a sum of Rs 4,500, find the rate of interest.
41. You have Rs 2,400 in your account and the interest rate is 5%. After how many years would you earn Rs 240 as interest.

42. On a certain sum the interest paid after 3 years is Rs 450 at 5% rate of interest per annum. Find the sum.

43. In what time will Rs. 1860 amount to Rs. 2278.50, if simple interest is calculated at 9% per annum?

44. Simple interest on a certain sum is $\frac{16}{25}$ of the sum. Find the rate percent and the time if both are numerically equal.

45. In what time will Rs. 1600 amount to Rs. 1768 at 6% per annum simple interest?

46. At what rate percent per annum simple interest will a sum be double itself in 8 years?

47. At what rate percent per annum simple interest will a sum treble itself in 16 years?

48. A sum amounts to Rs. 3720 in 8 months at 5% per annum simple interest. Find the sum.

49. A sum of Rs 10,000 is borrowed at a rate of interest 15% per annum for 2 years. Find the simple interest on this sum and the amount to be paid at the end of 2 years.

50. A man got a 10% increase in his salary. If his new salary is Rs 1,54,000, find his original salary.
MCQ WORKSHEET - I
CLASS VII: CHAPTER - 9
RATIONAL NUMBERS

1. Associative property is not followed in _____
   (a) whole numbers (b) integers (c) natural numbers (d) rational numbers

2. _____ is the identity for the addition of rational numbers.
   (a) 1 (b) 0 (c) –1 (d) 1/2

3. _____ is the multiplicative identity for rational numbers.
   (a) 1 (b) 0 (c) –1 (d) 1/2

4. The additive inverse of \(\frac{7}{5}\) is
   (a) 1 (b) 0 (c) –\(\frac{7}{5}\) (d) \(\frac{7}{5}\)

5. Zero has ________ reciprocal.
   (a) 1 (b) 2 (c) 3 (d) no

6. The numbers ________ and ________ are their own reciprocals
   (a) 1 and 0 (b) 1 and –1 (c) –1 and 0 (d) none of these.

7. The reciprocal of – 5 is ________.
   (a) 5 (b) 1 (c) –\(\frac{1}{5}\) (d) \(\frac{1}{5}\)

8. Reciprocal of \(\frac{1}{x}\), where \(x \neq 0\) is ________.
   (a) 1 (b) x (c) 0 (d) none of these

9. The product of two rational numbers is always a ________.
   (a) whole numbers (b) integers (c) natural numbers (d) rational numbers

10. Simplify: \(-\frac{4}{5} \times \frac{3}{7} \times \frac{15}{16} \times \left(-\frac{14}{9}\right)\)
    (a) 1 (b) 0 (c) 2 (d) \(\frac{1}{2}\)

11. The sum of the rational numbers \(-\frac{5}{16}\) and \(\frac{7}{12}\) is
    (a) –\(\frac{7}{48}\) (b) –\(\frac{11}{30}\) (c) \(\frac{13}{48}\) (d) \(\frac{1}{3}\)

12. What number should be added to \(\frac{7}{12}\) to get \(\frac{4}{15}\)?
    (a) –\(\frac{19}{60}\) (b) –\(\frac{11}{30}\) (c) \(\frac{51}{60}\) (d) \(\frac{1}{20}\)

Prepared by: M. S. KumarSwamy, TGT(Maths)
MCQ WORKSHEET-II
CLASS VII: CHAPTER - 9
RATIONAL NUMBERS

1. The reciprocal of a positive rational number is ________.
   (a) negative    (b) positive    (c) zero    (d) none of these

2. What number should be subtracted from \(-\frac{3}{5}\) to get \(-2\)?
   (a) \(-\frac{7}{5}\)    (b) \(-\frac{13}{5}\)    (c) \(\frac{13}{5}\)    (d) \(\frac{7}{5}\)

3. Which of the rational numbers \(-\frac{11}{28}, -\frac{5}{7}, -\frac{9}{14}, -\frac{29}{42}\) is the greatest?
   (a) \(-\frac{11}{28}\)    (b) \(-\frac{5}{7}\)    (c) \(-\frac{9}{14}\)    (d) \(-\frac{29}{42}\)

4. Which of the rational numbers \(-\frac{5}{16}, -\frac{13}{24}, \frac{3}{-4}, \frac{7}{-12}\) is the smallest?
   (a) \(-\frac{5}{16}\)    (b) \(-\frac{13}{24}\)    (c) \(\frac{3}{-4}\)    (d) \(-\frac{7}{-12}\)

5. Simplify: \(\frac{2}{3} + \frac{-4}{5} + \frac{7}{15} + \frac{-11}{20}\)
   (a) \(-\frac{1}{5}\)    (b) \(-\frac{13}{60}\)    (c) \(-\frac{4}{15}\)    (d) \(-\frac{7}{30}\)

6. Rational number \(\frac{3}{40}\) is equal to:
   (a) 0.75    (b) 0.12    (c) 0.012    (d) 0.075

7. A rational number between 3 and 4 is:
   (a) \(\frac{3}{2}\)    (b) \(\frac{4}{3}\)    (c) \(\frac{7}{2}\)    (d) \(\frac{7}{4}\)

8. A rational number between \(\frac{3}{5}\) and \(\frac{4}{5}\) is:
   (a) \(\frac{7}{5}\)    (b) \(\frac{7}{10}\)    (c) \(\frac{3}{10}\)    (d) \(\frac{4}{10}\)

9. A rational number between \(\frac{1}{2}\) and \(\frac{3}{4}\) is:
   (a) \(\frac{2}{5}\)    (b) \(\frac{5}{8}\)    (c) \(\frac{4}{3}\)    (d) \(\frac{1}{4}\)

10. The multiplicative inverse of \(\frac{3}{40}\) is:
    (a) 1    (b) 0    (c) any number    (d) none of these

Prepared by: M. S. KumarSwamy, TGT(Maths)
1. Find x such that \( \frac{-1}{5} = \frac{8}{x} \)
   (a) -5   (b) -40   (c) any number   (d) none of these

2. Find x such that \( \frac{7}{-3} = \frac{x}{6} \)
   (a) -14   (b) -3   (c) -21   (d) none of these

3. Find x such that \( \frac{3}{5} = \frac{x}{-25} \)
   (a) -5   (b) -15   (c) -15   (d) none of these

4. Find x such that \( \frac{13}{6} = \frac{-65}{x} \)
   (a) -30   (b) 30   (c) -6   (d) none of these

5. Find x such that \( \frac{16}{x} = -4 \)
   (a) 4   (b) -4   (c) 2   (d) none of these

6. Find x such that \( \frac{-48}{x} = 2 \)
   (a) 24   (b) -12   (c) -24   (d) none of these

7. Find x such that \( \frac{-3}{8} \) and \( \frac{x}{-24} \) are equivalent rational numbers.
   (a) 3   (b) 9   (c) 8   (d) none of these

8. Find the value of \( \frac{9}{2} \times \frac{-4}{3} \)
   (a) 6   (b) -6   (c) 1   (d) none of these

9. Find the value of \( \frac{3}{-5} \times \frac{-5}{-3} \)
   (a) -1   (b) 0   (c) 1   (d) none of these

10. Find the value of \( \frac{3}{10} \times \frac{-2}{3} \)
    (a) 5   (b) \( \frac{1}{5} \)   (c) \( \frac{-1}{5} \)   (d) none of these

11. Find the value of \( (-6) \div \frac{2}{5} \)
    (a) -9   (b) 9   (c) -4   (d) none of these
12. Find the value of $\frac{-1}{8} \div \frac{3}{4}$
   
   (a) $\frac{-1}{6}$  (b) $\frac{1}{6}$  (c) $\frac{-3}{32}$  (d) none of these

The points P, Q, R, S, T, U and V on the number line are such that, US = SV = VR, and WT = TP = PQ. Answer the following question from Q13 – Q20.

---

13. The rational number represented by P
   (a) $\frac{3}{5}$  (b) $\frac{2}{5}$  (c) $\frac{4}{5}$  (d) none of these

14. The rational number represented by Q
   (a) $\frac{3}{5}$  (b) $\frac{2}{5}$  (c) $\frac{4}{5}$  (d) none of these

15. The rational number represented by R
   (a) $\frac{-3}{5}$  (b) $\frac{-2}{5}$  (c) $\frac{-4}{5}$  (d) none of these

16. The rational number represented by S
   (a) $\frac{-3}{5}$  (b) $\frac{-2}{5}$  (c) $\frac{-4}{5}$  (d) none of these

17. The rational number represented by T
   (a) $\frac{3}{5}$  (b) $\frac{2}{5}$  (c) $\frac{4}{5}$  (d) none of these

18. The rational number represented by U
   (a) $\frac{-3}{5}$  (b) $\frac{-2}{5}$  (c) $\frac{-4}{5}$  (d) none of these

19. The rational number represented by V
   (a) $\frac{-3}{5}$  (b) $\frac{-2}{5}$  (c) $\frac{-4}{5}$  (d) none of these

20. The rational number represented by W
   (a) $\frac{3}{5}$  (b) $\frac{2}{5}$  (c) $\frac{4}{5}$  (d) none of these
MCQ WORKSHEET-IV
CLASS VII: CHAPTER - 9
RATIONAL NUMBERS

1. The equivalent rational number of $\frac{-6}{5}$ is
   (a) $\frac{-3}{5}$  (b) $\frac{12}{10}$  (c) $\frac{-12}{10}$  (d) none of these

2. Fill in the boxes with the correct symbol: $\frac{-5}{7} \ldots \frac{2}{3}$
   (a) $>$  (b) $<$  (c) $=$  (d) none of these

3. Fill in the boxes with the correct symbol: $\frac{-4}{5} \ldots \frac{-5}{7}$
   (a) $>$  (b) $<$  (c) $=$  (d) none of these

4. Fill in the boxes with the correct symbol: $\frac{-7}{8} \ldots \frac{14}{16}$
   (a) $>$  (b) $<$  (c) $=$  (d) none of these

5. Fill in the boxes with the correct symbol: $\frac{5}{-11} \ldots \frac{-5}{11}$
   (a) $>$  (b) $<$  (c) $=$  (d) none of these

6. Fill in the boxes with the correct symbol: $\frac{1}{-3} \ldots \frac{-1}{4}$
   (a) $>$  (b) $<$  (c) $=$  (d) none of these

7. Rewrite the rational number $\frac{-18}{48}$ in the simplest form.
   (a) $\frac{-9}{24}$  (b) $\frac{-3}{8}$  (c) $\frac{3}{8}$  (d) none of these

8. Rewrite the rational number $\frac{24}{-72}$ in the simplest form.
   (a) $\frac{12}{-36}$  (b) $\frac{6}{-18}$  (c) $\frac{1}{-3}$  (d) none of these

9. Rewrite the rational number $\frac{44}{-72}$ in the simplest form.
   (a) $\frac{22}{-36}$  (b) $\frac{11}{-18}$  (c) $\frac{11}{18}$  (d) none of these

10. Write the next rational number in the pattern: $\frac{-3}{5}, \frac{-6}{10}, \frac{-9}{15}, \frac{-12}{20}, \ldots$
    (a) $\frac{12}{25}$  (b) $\frac{15}{25}$  (c) $\frac{-15}{25}$  (d) none of these
11. Write the next rational number in the pattern: \( \frac{-1}{4}, \frac{-2}{8}, \frac{-3}{12}, \ldots \)

(a) \( \frac{-4}{15} \)  (b) \( \frac{-4}{16} \)  (c) \( \frac{-4}{20} \)  (d) none of these

12. Write the next rational number in the pattern: \( \frac{-1}{6}, \frac{2}{12}, \frac{3}{18}, \frac{4}{24}, \ldots \)

(a) \( \frac{-5}{30} \)  (b) \( \frac{5}{30} \)  (c) \( \frac{4}{30} \)  (d) none of these

13. Write the next rational number in the pattern: \( \frac{-1}{7}, \frac{2}{14}, \frac{3}{21}, \frac{4}{28}, \ldots \)

(a) \( \frac{-5}{35} \)  (b) \( \frac{5}{35} \)  (c) \( \frac{4}{35} \)  (d) none of these

14. Write the next rational number in the pattern: \( -1, \frac{-1}{2}, \frac{-1}{4}, \frac{-1}{6}, \ldots \)

(a) \( -\frac{1}{8} \)  (b) \( \frac{1}{8} \)  (c) \( -\frac{1}{8} \)  (d) none of these

15. Rewrite the rational number \( \frac{-36}{24} \) in the simplest form.

(a) \( -\frac{18}{12} \)  (b) \( -\frac{9}{6} \)  (c) \( -\frac{3}{2} \)  (d) none of these
PRACTICE QUESTIONS
CLASS VII: CHAPTER - 9
RATIONAL NUMBERS

1. Fill in the boxes:
   (i) \( \frac{5}{4} = \square = \frac{25}{16} = \square = -15 \)
   (ii) \( \frac{-3}{7} = \square = \frac{9}{14} = \square = -6 \)

2. Reduce to the standard form:
   (i) \( \frac{-45}{30} \) (ii) \( \frac{36}{-24} \) (iii) \( \frac{-3}{-15} \) (iv) \( \frac{-18}{45} \) (v) \( \frac{-12}{18} \)

3. Find five rational numbers between \( \frac{-5}{7} \) and \( \frac{-3}{8} \).

4. List three rational numbers between \( -2 \) and \( -1 \).

5. Write four more numbers in the following pattern:
   \[ \frac{1}{3}, \frac{2}{4}, \frac{3}{5}, \frac{4}{6} \], \[ \frac{3}{3}, \frac{6}{6}, \frac{9}{9}, \frac{12}{12} \]

6. Which is greater in each of the following:
   (i) \( \frac{2}{3}, \frac{5}{2} \) (ii) \( \frac{-5}{6}, \frac{-4}{3} \) (iii) \( \frac{-3}{4}, \frac{2}{-3} \)
   (iv) \( \frac{-1}{4}, \frac{1}{4} \) and (v) \( -\frac{2}{7}, -\frac{3}{4} \)

7. Write the following rational numbers in ascending order:
   (i) \( \frac{-3}{5}, \frac{-2}{5}, \frac{-1}{5} \) (ii) \( \frac{-1}{3}, \frac{-2}{3}, \frac{-4}{3} \) (iii) \( \frac{-3}{7}, \frac{-3}{2}, \frac{-3}{4} \)

8. Write the following rational numbers in descending order:
   \( \frac{1}{3}, \frac{2}{9}, \frac{4}{3} \)

9. The points P, Q, R, S, T, U, A and B on the number line are such that, TR = RS = SU and AP = PQ = QB. Name the rational numbers represented by P, Q, R and S.

10. Give four rational numbers equivalent to:
    (i) \( \frac{-2}{7} \) (ii) \( \frac{5}{-3} \) (iii) \( \frac{4}{9} \)

Prepared by: M. S. KumarSwamy, TGT(Maths)
11. Draw the number line and represent the following rational numbers on it:
   (i) $\frac{3}{4}$  (ii) $-\frac{5}{8}$  (iii) $-\frac{7}{4}$  (iv) $\frac{7}{8}$

12. What will be the additive inverse of $-\frac{3}{9}$, $-\frac{9}{11}$, $\frac{5}{7}$?

13. Satpal walks $\frac{2}{3}$ km from a place P, towards east and then from there $1\frac{5}{7}$ km towards west. Where will he be now from P?

14. Find: (i) $\frac{7}{9} - \frac{2}{5}$ (ii) $2\frac{1}{5} - \frac{(-1)}{3}$

15. Find: (i) $\frac{2}{3} \times \frac{-7}{8}$ (ii) $\frac{-6}{7} \times \frac{5}{7}$

16. What will be the reciprocal of $-\frac{6}{11}$ and $\frac{-8}{5}$?

17. Find the sum:
   (i) $\frac{5}{4} + \left(\frac{-11}{4}\right)$  (ii) $\frac{-8}{9} + \left(\frac{-2}{19}\right)$  (iii) $-2\frac{1}{3} + 4\frac{3}{5}$  (iv) $\frac{-9}{10} + \frac{22}{15}$

18. Find:
   (i) $\frac{7}{24} - \frac{17}{36}$  (ii) $\frac{5}{63} - \left(\frac{-6}{21}\right)$  (iii) $\frac{-6}{13} - \left(\frac{-7}{15}\right)$

19. Find the product:
   (i) $\frac{9}{2} \times \left(\frac{-7}{4}\right)$  (ii) $\frac{-6}{15} \times \frac{9}{11}$  (iii) $\frac{3}{7} \times \left(\frac{-2}{5}\right)$

20. Find the value of:
   (i) $-\frac{3}{5} \div 2$  (ii) $-\frac{4}{5} \div (-3)$  (iii) $-\frac{1}{8} \div \frac{3}{4}$  (iv) $-\frac{2}{13} \div \frac{1}{7}$  (v) $-\frac{7}{12} \div \left(\frac{-2}{13}\right)$

21. Find $\frac{3}{7} + $ \frac{-6}{11} + $ \frac{-8}{21} + $ \frac{5}{22}$

22. Find $-\frac{4}{5} \times \frac{3}{7} \times \frac{15}{16} \times \left(\frac{-14}{9}\right)$

23. Find using distributive property: (i) $\left[\frac{7}{5} \times \left(\frac{-3}{12}\right)\right] + \left[\frac{7}{5} \times \frac{5}{12}\right]$  (ii) $\left[\frac{9}{16} \times \frac{4}{12}\right] + \left[\frac{9}{16} \times \frac{-3}{9}\right]$  

24. Find $\frac{2}{5} \times \frac{-3}{7} - \frac{1}{14} - \frac{3}{7} \times \frac{3}{5}$
25. Simplify: \[ \frac{-4}{5} \times \frac{3}{7} \times \frac{15}{16} \times \left( \frac{-14}{9} \right) \]

26. Multiply \( \frac{6}{13} \) by the reciprocal of \( \frac{-7}{16} \).

27. What number should be added to \( \frac{7}{12} \) to get \( \frac{4}{15} \)?

28. What number should be subtracted from \( \frac{3}{5} \) to get \( -2 \)?

29. Write any 3 rational numbers between \(-2\) and 0.

30. Find any ten rational numbers between \( -\frac{5}{6} \) and \( \frac{5}{8} \)

31. Find three rational numbers between \( \frac{1}{4} \) and \( \frac{1}{2} \)

32. Find ten rational numbers between \( \frac{1}{4} \) and \( \frac{1}{2} \)

33. Represent these numbers on the number line. (i) \( \frac{7}{4} \) (ii) \( \frac{-5}{6} \) (iii) \( \frac{4}{7} \) (iv) \( \frac{9}{4} \)

34. Represent \( \frac{-2}{11}, \frac{-5}{11}, \frac{-9}{11} \) on the number line

35. Find five rational numbers between (i) \( \frac{2}{3} \) and \( \frac{4}{5} \) (ii) \( \frac{-3}{2} \) and \( \frac{5}{3} \)

36. Find five rational numbers between \( \frac{1}{4} \) and \( \frac{1}{2} \)

37. Write five rational numbers greater than \(-2\)

38. Find ten rational numbers between \( \frac{3}{5} \) and \( \frac{3}{4} \).

39. Write.
   (i) The rational number that does not have a reciprocal.
   (ii) The rational numbers that are equal to their reciprocals.
   (iii) The rational number that is equal to its negative.

40. Write five rational numbers which are smaller than 2.
MCQ WORKSHEET-I
CLASS VII: CHAPTER - 11
PERIMETER AND AREA

1. The area of a rectangular sheet is 500 cm\(^2\). If the length of the sheet is 25 cm, what is its width?
   (a) 20 cm  (b) 17 cm  (c) 30 cm  (d) 25 cm

2. If the area of rectangle increases from 2 cm\(^2\) to 4 cm\(^2\) the perimeter will
   (a) increase  (b) decrease  (c) remains same  (d) none of these

3. The area of a square whose perimeter is 4 m
   (a) 1 m\(^2\)  (b) 4 m\(^2\)  (c) 2 m\(^2\)  (d) 3 m\(^2\)

4. Which figure encloses more area: a square of side 2 cm; a rectangle of side 3 cm & 2 cm; An equilateral triangle of side 4 cm
   (a) rectangle  (b) square  (c) triangle  (d) same of rectangle & square

5. The area of rectangle whose length is 15 cm & breadth is 6 m
   (a) 9000 cm\(^2\)  (b) 90 cm\(^2\)  (c) 9 cm\(^2\)  (d) 900 cm\(^2\)

6. ΔABC is isosceles in which AE ⊥ BC, AE = 6 cm, BC = 9 cm, the area of ΔABC is
   (a) 27 cm\(^2\)  (b) 54 cm\(^2\)  (c) 22.5 cm\(^2\)  (d) 45 cm\(^2\)

7. The area of parallelogram is
   (a) base + height  (b) base x height  (c) base x base  (d) height x height

8. The base in the area of parallelogram is
   (a) \(\frac{area}{height}\)  (b) \(\frac{height}{area}\)  (c) area x base  (d) area x height

9. The height in the area of parallelogram is
   (a) \(\frac{area}{base}\)  (b) \(\frac{base}{area}\)  (c) area x base  (d) area x height

10. Which of the following has the formula: Base x Height
    (a) area of parallelogram  (b) area of quadrilateral
        (c) area of triangle  (d) area of trapezium

11. The area of triangle is
    (a) base x height  (b) \(\frac{1}{2}\) x base x height  (c) \(\frac{1}{2}\) x (base + height) (d) base + height

12. The height in the area of a triangle
    (a) \(\frac{2\cdot area}{base}\)  (b) \(\frac{2\cdot base}{area}\)  (c) \(\frac{base}{2\cdot area}\)  (d) \(\frac{area}{2\cdot base}\)
MCQ WORKSHEET -II
CLASS VII: CHAPTER - 11
PERIMETER AND AREA

1. If the area of the triangle is 36 cm² and the height is 3 cm, the base of the triangle will be
   (a) 12 cm  (b) 39 cm  (c) 108 cm  (d) 24 cm

2. The base in the area of triangle is
   (a) \( \frac{2 \cdot \text{area}}{\text{height}} \)  (b) \( \frac{2 \cdot \text{height}}{\text{area}} \)  (c) \( \frac{\text{height}}{2 \cdot \text{area}} \)  (d) \( \frac{\text{area}}{2 \cdot \text{height}} \)

3. The distance around a circular region is known as its
   (a) area  (b) diameter of circle  (c) circumference  (d) radius

4. The perimeter of square of side 2.5 m is
   (a) 10.2 m  (b) 10.2 m²  (c) 6.25 m²  (d) 6.25 m

5. The perimeter of rectangle of length 1.5 cm & breadth 2 cm is
   (a) 3.4 cm  (b) 7 cm  (c) 6 cm  (d) 3.5 cm

6. The area of parallelogram whose base 6 cm & altitude 7 cm is
   (a) 18 cm²  (b) 18 cm  (c) 9 cm²  (d) 9 cm

7. The height of parallelogram whose area is 35 cm² and altitude 7 cm
   (a) 5 cm  (b) 5 cm²  (c) 245 cm  (d) 245 cm²

8. Area of triangle whose base is 15 cm and corresponding altitude is 6 cm will be
   (a) 45 cm²  (b) 90 cm²  (c) 45 cm  (d) 90 cm

9. Find the area of a right triangle whose base is 3 cm, perpendicular is 2 cm and hypotenuse is 5 cm.
   (a) 3 cm²  (b) 7.5 cm²  (c) 5 cm²  (d) 6 cm

10. What will be the area of circular button of radius 7 cm
    (a) 154 cm²  (b) 49 cm²  (c) 154 cm  (d) 3.14 x 7 cm²

11. The circumference of circle whose diameter is 14 cm will be
    (a) 44 cm  (b) 88 cm  (c) 44 cm²  (d) 88 cm²

12. The perimeter of circle is its
    (a) area  (b) circumference  (c) radius  (d) diameter

13. Diameter is ________.
    (a) twice radius  (b) half radius  (c) equal to radius  (d) one-third of radius

14. \( \pi \) (pi) is
    (a) ratio of circumference to diameter  (b) 21/17
    (c) diameter to circumference  (d) 3.41

15. If the area of circle is 44 cm², the area of shaded portion will be
    (a) 11 cm²  (b) 11 cm  (c) 22 cm²  (d) 22 cm²

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MCQ WORKSHEET-III
CLASS VII: CHAPTER - 11
PERIMETER AND AREA

1. If the radius of pipe is 1 cm, the circumference of pipe will be
   (a) 62.8 cm  (b) 6.28 cm  (c) 62.8 cm²  (d) 6.28 cm

2. The circumference of a circle is
   (a) \( \pi r \)  (b) \( \pi r^2 \)  (c) \( \pi \times 2r \)  (d) \( \pi + 2r \)

3. The diameter of a circle is
   (a) \( r^2 \)  (b) 2r  (c) \( 2\pi r^3 \)  (d) \( \pi r^2 \)

4. Which of the following is an example of circle?
   (a) a chair  (b) a bottle cap  (c) a cup  (d) a table

5. The area of a circle is
   (a) 2 \( \pi r \)  (b) \( 2\pi r^2 \)  (c) \( \pi r^2 \)  (d) \( \pi d \)

6. 1 \( m^2 \) = __________ .
   (a) 100 \( cm^2 \)  (b) 1000 \( cm^2 \)  (c) 10000 \( m^2 \)  (d) 10000 \( cm^2 \)

7. One hectare is equal to
   (a) 100 \( m^2 \)  (b) 1000 \( m^2 \)  (c) 10,000 \( m^2 \)  (d) 10,000 m

8. The circumference of a circle with radius 7 cm is
   (a) 11 cm  (b) 22 cm  (c) 44 cm  (d) 49 cm

9. The value of constant \( \pi \) is
   (a) 31.4  (b) \( \frac{22}{7} \)  (c) \( \frac{7}{22} \)  (d) 314

10. The area of a circle is 49\( \pi \) \( cm^2 \). Its circumference is
    (a) 7\( \pi \) cm  (b) 14\( \pi \) cm  (c) 21\( \pi \) cm  (d) 28\( \pi \) cm

11. The perimeter of circular field is 242 cm. The area of the field is
    (a) 9317 \( cm^2 \)  (b) 18634 \( cm^2 \)  (c) 4658.5 \( cm^2 \)  (d) none of these

12. The area of a circle is 38.5 \( cm^2 \). Its circumference is
    (a) 62 cm  (b) 12.1 cm  (c) 11 cm  (d) 22 cm

13. The difference between the circumference and radius of a circle is 37 cm. The area of the circle is
    (a) 111 \( cm^2 \)  (b) 184 \( cm^2 \)  (c) 154 \( cm^2 \)  (d) 259 \( cm^2 \)

14. The circumference of two circles are in the ratio 2 : 3. The ratio of their areas is
    (a) 2 : 3  (b) 4 : 9  (c) 9 : 4  (d) none of these

15. On increasing the diameter of circle by 40%, its area will be increased by
    (a) 40%  (b) 80%  (c) 96%  (d) none of these

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MCQ WORKSHEET-IV
CLASS VII: CHAPTER - 11
PERIMETER AND AREA

1. On decreasing the radius of the circle by 30%, its area is decreased by
   (a) 30%       (b) 60%       (c) 45%       (d) none of these

2. The area of the square is the same as the area of the circle. Their perimeter re in the ratio
   (a) 1 : 1       (b) $\pi : 2$       (c) $2 : \pi$       (d) none of these

3. The areas of the two circle are in the ratio 4 : 9. The ratio of their circumference is
   (a) 2 : 3       (b) 4 : 9       (c) 9 : 4       (d) 4 : 9

4. In making 1000 revolutions, a wheel covers 88 km. The diameter of the wheel is
   (a) 14 m       (b) 24 m       (c) 28 m       (d) 40 m

5. The diameter of a wheel is 40 cm. How many revolutions will it make an covering 176 m?
   (a) 140       (b) 150       (c) 160       (d) 166

6. The radius of wheel is 0.25 m. How many revolutions will it make in covering 11 km?
   (a) 2800       (b) 4000       (c) 5500       (d) 7000

7. Find the circumference of a circle of diameter 21 cm.
   (a) 62 cm       (b) 64 cm       (c) 66 cm       (d) 68 cm

8. Find the area of a circle whose circumference is 52.8 cm.
   (a) 221.76 cm$^2$       (b) 220.76 cm$^2$       (c) 200.76 cm$^2$       (d) none of these.

9. A steel wire when bent in the form of a square, encloses an area of 121 sq. cm. The same wire is
   bent in the form of a circle. Find the area of the circle.
   (a) 111 cm$^2$       (b) 184 cm$^2$       (c) 154 cm$^2$       (d) 259 cm$^2$

10. If the perimeter of a semicircular protractor is 36 cm, find the diameter.
   (a) 14 cm       (b) 16 cm       (c) 18 cm       (d) 12 cm

11. A bicycle wheel makes 5000 revolutions in moving 11 km. Find the diameter of the wheel.
   (a) 60 cm       (b) 70 cm       (c) 66 cm       (d) 68 cm

12. The diameter of the wheels of a bus is 140 cm. How many revolutions per minute must a wheel
    make in order to move at a speed of 66km/hr?
    (a) 240       (b) 250       (c) 260       (d) 270

13. The perimeter of regular polygon is
    (a) no. of sides $\times$ lengths of one side       (b) no. of sides + lengths of one side
    (c) no. of sides $-$ lengths of one side       (d) no. of sides $\div$ lengths of one side

14. A wire is in the shape of a square of side 10 cm. If the wire is rebent into a rectangle of length 12
    cm, find its breadth.
    (a) 12 cm       (b) 7 cm       (c) 8 cm       (d) 9 cm
15. A paper is in the form of a rectangle ABCD in which AB = 18 cm and BC = 14 cm. A semicircular portion with BC as diameter is cut off. Find the area of the remaining paper (see below figure).

(a) 175 cm\(^2\)  (b) 165 cm\(^2\)  (c) 145 cm\(^2\)  (d) none of these

16. Find the area of the shaded region in the above sided figure. Take \(\pi = 3.14\)

(a) 75 cm\(^2\)  (b) 72 cm\(^2\)  (c) 70 cm\(^2\)  (d) none of these

17. The perimeter of parallelogram PQRS is:

(a) 12 cm  (b) 7 cm  (c) 38 cm  (d) 19 cm

18. The area of a square and a rectangle are equal. If the side of the square is 40 cm and the breadth of the rectangle is 25 cm, find the length of the rectangle.

(a) 60 cm  (b) 62 cm  (c) 64 cm  (d) 68 cm
1. A door-frame of dimensions 3 m × 2 m is fixed on the wall of dimension 10 m × 10 m. Find the total labour charges for painting the wall if the labour charges for painting 1 m² of the wall is Rs 2.50.

2. The area of a rectangular sheet is 500 cm². If the length of the sheet is 25 cm, what is its width? Also find the perimeter of the rectangular sheet.

3. Anu wants to fence the garden in front of her house, on three sides with lengths 20 m, 12 m and 12 m. Find the cost of fencing at the rate of Rs 150 per metre.

4. A wire is in the shape of a square of side 10 cm. If the wire is rebent into a rectangle of length 12 cm, find its breadth. Which encloses more area, the square or the rectangle?

5. The area of a square and a rectangle are equal. If the side of the square is 40 cm and the breadth of the rectangle is 25 cm, find the length of the rectangle. Also, find the perimeter of the rectangle.

6. In a parallelogram ABCD, AB = 7.2 cm and the perpendicular from C on AB is 4.5 cm.

7. Find the area of following parallelograms:

   (i) 
   ![Parallelogram](image)
   
   (ii) Find the area of the parallelogram.

8. One of the sides and the corresponding height of a parallelogram are 4 cm and 3 cm respectively. Find the area of the parallelogram.

9. Find the height ‘x’ if the area of the parallelogram is 24 cm² and the base is 4 cm.

10. The two sides of the parallelogram ABCD are 6 cm and 4 cm. The height corresponding to the base CD is 3 cm. Find the (i) area of the parallelogram. (ii) the height corresponding to the base AD.

11. Find BC, if the area of the triangle ABC is 36 cm² and the height AD is 3 cm.

12. What is the circumference of a circle of diameter 10 cm (Take π = 3.14)?

13. What is the circumference of a circular disc of radius 14 cm?
14. Find the area of the following triangles.

![Image]

15. The radius of a circular pipe is 10 cm. What length of a tape is required to wrap once around the pipe ($\pi = 3.14$)?

16. Find the area of a circle of radius 30 cm (use $\pi = 3.14$).

17. Diameter of a circular garden is 9.8 m. Find its area.

18. Shazli took a wire of length 44 cm and bent it into the shape of a circle. Find the radius of that circle. Also find its area. If the same wire is bent into the shape of a square, what will be the length of each of its sides? Which figure encloses more area, the circle or the square?

19. From a circular card sheet of radius 14 cm, two circles of radius 3.5 cm and a rectangle of length 3 cm and breadth 1 cm are removed. (as shown in the adjoining figure). Find the area of the remaining sheet.

20. The circumference of a circle is 31.4 cm. Find the radius and the area of the circle? (Take $\pi = 3.14$)

21. A circular flower bed is surrounded by a path 4 m wide. The diameter of the flower bed is 66 m. What is the area of this path? ($\pi = 3.14$)

22. How many times a wheel of radius 28 cm must rotate to go 352 m?

23. The minute hand of a circular clock is 15 cm long. How far does the tip of the minute hand move in 1 hour. (Take $\pi = 3.14$)

24. A rectangular park is 45 m long and 30 m wide. A path 2.5 m wide is constructed outside the park. Find the area of the path.

25. A path 5 m wide runs along inside a square park of side 100 m. Find the area of the path. Also find the cost of cementing it at the rate of Rs 250 per 10 m$^2$.

26. Two cross roads, each of width 5 m, run at right angles through the centre of a rectangular park of length 70 m and breadth 45 m and parallel to its sides. Find the area of the roads. Also find the cost of constructing the roads at the rate of Rs 105 per m$^2$.

27. Two cross roads, each of width 10 m, cut at right angles through the centre of a rectangular park of length 700 m and breadth 300 m and parallel to its sides. Find the area of the roads. Also find the area of the park excluding cross roads. Give the answer in hectares.
28. In the following figures, find the area of the shaded portions:

![Diagram](image1)

(i) The area of the shaded portion in the left figure.
(ii) The area of the shaded portion in the right figure.

29. The adjoining figure represents a rectangular lawn with a circular flower bed in the middle. Find:
   (i) the area of the whole land
   (ii) the area of the flower bed
   (iii) the area of the lawn excluding the area of the flower bed
   (iv) the circumference of the flower bed.

![Diagram](image2)

30. Pragya wrapped a cord around a circular pipe of radius 4 cm (adjoining figure) and cut off the length required of the cord. Then she wrapped it around a square box of side 4 cm (also shown). Did she have any cord left? \(\pi = 3.14\)

31. In Fig., ABCD is a square of side 14 cm. With centres A, B, C and D, four circles are drawn such that each circle touch externally two of the remaining three circles. Find the area of the shaded region.

![Diagram](image3)

32. From each corner of a square of side 4 cm a quadrant of a circle of radius 1 cm is cut and also a circle of diameter 2 cm is cut as shown in above sided Fig. Find the area of the remaining portion of the square.

![Diagram](image4)

33. The cost of fencing a circular field at the rate of Rs 24 per metre is Rs 5280. The field is to be ploughed at the rate of Rs 0.50 per m². Find the cost of ploughing the field.

34. The radii of two circles are 8 cm and 6 cm respectively. Find the radius of the circle having area equal to the sum of the areas of the two circles.

35. The radii of two circles are 19 cm and 9 cm respectively. Find the radius of the circle which has circumference equal to the sum of the circumferences of the two circles.
1. What are the coefficients of $x$ in the expression $8 - x + y$?
   (a) 1  (b) $-1$  (c) 8  (d) none of these

2. What are the coefficients of $y$ in the expression $4x - 3y$?
   (a) 4  (b) $-3$  (c) 3  (d) none of these

3. What are the coefficients of $y$ in the expression $yz^2 + 5$?
   (a) 5  (b) $z$  (c) $z^2$  (d) none of these

4. Write the expression for the statement: the sum of three times $x$ and 11
   (a) $x + 3 + 11$  (b) $3x + 11$  (c) $3 + 11x$  (d) $3x - 11$

5. Write an expression: Raju's father's age is 5 years more than 3 times Raju's age. If Raju's age is $x$ years, then father's age is
   (a) $3x + 5$  (b) $5 - 3x$  (c) $3x - 5$  (d) $15x$

6. Identify the coefficient of $x$ in expression $8 - x + y$
   (a) 0  (b) 8  (c) $-1$  (d) 1

7. The number of terms in $4p^2q - 3pq^2 + 5$ is
   (a) 7  (b) 3  (c) 1  (d) 4

8. The expression for sum of numbers $a$ and $b$ subtracted from their product is
   (a) $a + b - ab$  (b) $ab - a + b$  (c) $ab - (a+b)$  (d) $ab + a - b$

9. The sum of $mn + 5 - 2$ and $mn + 3$ is
   (a) $2mn + 3$  (b) 6  (c) $2mn + 8$  (d) $2mn + 6$

10. What is the statement for the expression $3mn + 5$
    (a) 5 more than $\frac{1}{3}$ of product of $m$ and $n$
    (b) number 5 added to product of number $m$ and $n$
    (c) number 5 added to 3 times the product of $m$ and $n$
    (d) 5 more than 3 times the product of the numbers $m$ and $n$

11. The constant term in the expression $1 + x^2 + x$ is
    (a) 1  (b) 2  (c) $x$  (d) $x^2$

12. The coefficient of $y^3$ in the expression $y - y^3 + y^2$ is
    (a) 1  (b) $y$  (c) $-y^3$  (d) $-1$
MCQ WORKSHEET-II
CLASS VII: CHAPTER - 12
ALGEBRAIC EXPRESSIONS

1. The number of terms in the expression 1.2ab – 2.4b + 3.6a is
   (a) 1.2  (b) –2.4  (c) 3.6a  (d) 3

2. What is the numerical coefficient of \( y^2 \) in the expression \( 2x^2y - 15xy^2 + 7y \)
   (a) –15x  (b) –15  (c) 2  (d) 7

3. The expression \( x + y - xy \) is
   (a) Monomial  (b) Binomial  (c) Trinomial  (d) Quadrinomial

4. The expression \( xyz \) is
   (a) Monomial  (b) Binomial  (c) Trinomial  (d) Zero polynomial

5. From the following expressions 10pq, 7p, 8q, \(-p^2q^2\), \(-7pq\), \(-23\), ab,3a,b, the like terms are
   (a) 3,7p  (b) 10 pq, –7pq  (c) ab,3a,b  (d)10pq,7p,8q

6. From the following expressing 3ab,a²,b²,a5ab, –2ab,2a² the three terms are
   (a) 3ab,5ab, –2ab  (b) a²,a,2a²  (c)3ab,a²,b²  (d)2a²,a², a

7. Sum of 3m and 2n is
   (a) 5mn  (b) 3m+2n  (c) 5m  (d) 5n

8. Sum of xy, x+y and y+ xy is
   (a) 2xy +2x+y  (b) 3xy+2y  (c) 2xy +x+y  (d) 2xy+x+2y

9. The value of \( 21b – 32 + 7b – 20b \) is
   (a) 48b – 32  (b) –8b – 32  (c)8b – 32  (d)28b – 52

10. Subtract \( a – b \) from \( a + b \) the result is
    (a) 2a + 2b  (b) 2a  (c) 2b  (d) 2a – 2b

11. Subtracting \(-5y^2\) from \( y^2 \), the result is
    (a) –4y²  (b) 6y²  (c) 4 \( y^2 \)  (d) –6y²

12. The value of expression \( 5n – 2 \), when \( n= -2 \) is
    (a) –12  (b) 8  (c) 1  (d) –8

13. The value of expression \( 7a – 4b \) for \( a = 3, b = 2 \) is
    (a) 13  (b) 7a – 6b  (c) 21a – 8b  (d) 29

14. When \( x = 0, y = -1 \), then the value of expression \( 2x + 2y \) is
    (a) 4  (b) 0  (c) –2  (d) 2

15. Factors of the term \( 15x^2 \) in the expression \( 15x^2 -13x \) are
    (a) 15, x, x  (b) 15,-13  (c) \( 15x^2, -13x \)  (d)15
1. Factors of the terms \(-4pq^2\) in the expression \(9p^2q^2 + 4pq^2\) are
(a) \(9p^2q^2, -4pq^2\)  (b) \(9, -4\)  (c) \(-4, p, q, q\)  (d) \(-4\)

2. If the length of each side of the equilateral triangle is \(l\), then the perimeter of the equilateral triangle is
(a) \(3l\)  (b) \(3 + l\)  (c) \(3 - l\)  (d) \(l/3\)

3. Which of the following is monomial
(a) \(2x + 3\)  (b) \(2x\)  (c) \(4x + 2y + 3\)  (d) \(4y + 5x + z - 1\)

4. Which of the following is trinomial
(a) \(2a + 6b - 1\)  (b) \(1\)  (c) \(5a - 7\)  (d) \(a + b + c - 3\)

5. Terms with factors \(y\) in the expression \(8 + xy + xyz\) are
(a) \(xy, xyz\)  (b) \(x, xz\)  (c) \(8, xy, xyz\)  (d) \(y, xz\)

6. Identify the terms in the expression \(x + y + 1\) which are not constant
(a) \(x, y, 1\)  (b) \(x, y\)  (c) \(x, 1\)  (d) \(y, 1\)

7. The value of expression \(4x - 3\) at \(x = 2\) is
(a) \(-4\)  (b) \(5\)  (c) \(4\)  (d) \(2\)

8. The value of expression \(5n^2 + 5n - 2\) for \(n = -2\) is
(a) \(13\)  (b) \(3\)  (c) \(8\)  (d) \(12\)

9. The value of expression \(2a^2 + 2b^2 - ab\) for \(a = 2, b = 1\) is
(a) \(2\)  (b) \(8\)  (c) \(6\)  (d) \(10\)

10. The value of \(x + 7 + 4(x - 5)\) for \(x = 2\)
(a) \(-3\)  (b) \(31\)  (c) \(12\)  (d) \(37\)

11. The value of expression \(2a - 2b - 4 - 5 + a\) at \(a = 1, b = -2\)
(a) \(10\)  (b) \(-2\)  (c) \(12\)  (d) \(-4\)

12. What must be subtracted from \(2a + b\) to get \(2a - b\)
(a) \(2b\)  (b) \(4a\)  (c) \(0\)  (d) \(4a + 4b\)

13. What must be added to \(3x + y\) to get \(2x + 3y\)
(a) \(5x + 4y\)  (b) \(-x + 2y\)  (c) \(x - 2y\)  (d) \(x + 2y\)

14. Subtract \(a + 2b\) from sum of \(a - b\) and \(2a + b\)
(a) \(2a - 2b\)  (b) \(4a + 2b\)  (c) \(2b\)  (d) \(-2a + 2b\)

15. On simplifying \((a + b - 3) - (b - a + 3) + (a - b + 3)\) the result is
(a) \(a - b + 3\)  (b) \(a - b - 3\)  (c) \(3a - b - 3\)  (d) \(3a + b + 3\)

16. What should be value of ‘a’ if \(y^2 + y - a\) equals to 3 for \(y = 1\)
(a) \(-1\)  (b) \(-5\)  (c) \(5\)  (d) \(0\)
17. What is an expression for the statement: “p is multiplied by 16”
   (a) 16p  (b) p/16  (c) p+16  (d) p-16

18. The expression for the statement: “y multiplied by 10 and then 7 added to product”.
   (a) 10 + y + 7  (b) 7y + 10  (c) 10y + 7  (d) 10y

19. What is the statement for the expression 2y – 9
   (a) 2y subtracted from 9  (b) 9 subtracted from y and multiplied by 2
   (c) 9 subtracted from 9  (d) thrice of y minus 9

20. Give expression for: “5 times of ‘y’ to which 3 is added”
   (a) y +15  (b) 5y + 3  (c) \( \frac{5}{y} \) + 3  (d) 3y +5

   (a) 4x – 4 = 4  (b) \( \frac{4}{x} \) – 4 = 4  (c) \( \frac{1}{4} \) x – 4 = 4  (d) x – 4 = \( \frac{1}{4} \)

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Prepared by: M. S. KumarSwamy, TGT(Maths)
PRACTICE QUESTIONS
CLASS VII: CHAPTER - 12
ALGEBRAIC EXPRESSIONS

1. Identify, in the following expressions, terms which are not constants. Give their numerical coefficients: xy + 4, 13 – y², 13 – y + 5y², 4p²q – 3pq² + 5

2. (a) What are the coefficients of x in the following expressions? 4x – 3y, 8 – x + y, y²x – y, 2z – 5xz
(b) What are the coefficients of y in the following expressions? 4x – 3y, 8 + yz, y² + 5, my + m

3. Classify the following expressions as a monomial, a binomial or a trinomial: a, a + b, ab + a + b, ab + a + b – 5, xy, xy + 5, 5x² – x + 2, 4pq – 3q + 5p, 7, 4m – 7n + 10, 4mn + 7.

4. Collect like terms and simplify the expression: 12m² – 9m + 5m – 4m² – 7m + 10

5. Add and subtract
(i) m – n, m + n
(ii) mn + 5 – 2, mn + 3

6. Subtract 24ab – 10b – 18a from 30ab + 12b + 14a.

7. From the sum of 2y² + 3yz, – y² – yz – z² and yz + 2z², subtract the sum of 3y² – z² and –y² + yz + z².

8. Classify the following polynomials as monomials, binomials, trinomials.
– z + 5, x + y + z, y + z + 100, ab – ac, 17

9. Construct
(a) 3 binomials with only x as a variable;
(b) 3 binomials with x and y as variables;
(c) 3 monomials with x and y as variables;
(d) 2 polynomials with 4 or more terms.

10. Add:
(i). t – 8tz, 3tz – z, z – t
(ii). 7mn + 5, 12mn + 2, 9mn – 8, –2mn – 3
(iii). a + b – 3, b – a + 3, a – b + 3
(iv). 14x + 10y – 12xy – 13, 18 – 7x – 10y + 8xy, 4xy
(v). 5m – 7n, 3n – 4m + 2, 2m – 3mn – 5

11. Add: 7xy + 5yz – 3zx, 4yz + 9zx – 4y, –3xz + 5x – 2xy.

12. Subtract 5x² – 4y² + 6y – 3 from 7x² – 4xy + 8y² + 5x – 3y.

13. Subtract 4a – 7ab + 3b + 12 from 12a – 9ab + 5b – 3

14. Subtract 3xy + 5yz – 7zx from 5xy – 2yz – 2zx + 10xyz

15. Subtract 4p²q – 3pq + 5pq² – 8p + 7q – 10 from 18 – 3p – 11q + 5pq – 2pq² + 5p²q
16. (a) What should be added to \(x^2 + xy + y^2\) to obtain \(2x^2 + 3xy\)?
(b) What should be subtracted from \(2a + 8b + 10\) to get \(-3a + 7b + 16\)?

17. What should be taken away from \(3x^2 - 4y^2 + 5xy + 20\) to obtain \(-x^2 - y^2 + 6xy + 20\)?

18. (a) From the sum of \(3x - y + 11\) and \(-y - 11\), subtract \(3x - y - 11\).
(b) From the sum of \(4 + 3x\) and \(5 - 4x + 2x^2\), subtract the sum of \(3x^2 - 5x\) and \(-x^2 + 2x + 5\).

19. Find the value of the following expressions for \(a = 3, b = 2\).
   (i) \(a + b\)
   (ii) \(7a - 4b\)
   (iii) \(a^2 + 2ab + b^2\)
   (iv) \(a^3 - b^3\)

20. Find the value of the following expressions when \(n = -2\).
   (i) \(5n - 2\)
   (ii) \(5n^2 + 5n - 2\)
   (iii) \(n^3 + 5n^2 + 5n - 2\)

21. Find the value of the following expressions for \(a = 3, b = 2\).
   (i) \(a + b\)
   (ii) \(7a - 4b\)
   (iii) \(a^2 + 2ab + b^2\)
   (iv) \(a^3 - b^3\)

22. What should be the value of \(a\) if the value of \(2x^2 + x - a\) equals to 5, when \(x = 0\)?

23. Simplify the expression and find its value when \(a = 5\) and \(b = -3\).
   \(2(a^2 + ab) + 3 - ab\)

24. If \(p = -10\), find the value of \(p^2 - 2p - 100\)

25. Use the given algebraic expression to complete the table of number patterns.

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Expression</th>
<th>Terms</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
<th>...</th>
<th>10th</th>
<th>...</th>
<th>100th</th>
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<tbody>
<tr>
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<td>(2n - 1)</td>
<td></td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>9</td>
<td>-</td>
<td>19</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>(ii)</td>
<td>(3n + 2)</td>
<td></td>
<td>2</td>
<td>5</td>
<td>8</td>
<td>11</td>
<td>-</td>
<td>-</td>
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<td>-</td>
</tr>
<tr>
<td>(iii)</td>
<td>(4n + 1)</td>
<td></td>
<td>5</td>
<td>9</td>
<td>13</td>
<td>17</td>
<td>-</td>
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<td>-</td>
</tr>
<tr>
<td>(iv)</td>
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<td>27</td>
<td>34</td>
<td>41</td>
<td>48</td>
<td>-</td>
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<td>-</td>
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</tr>
<tr>
<td>(v)</td>
<td>(n^2 + 1)</td>
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<td>5</td>
<td>10</td>
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<td>10,001</td>
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</tr>
</tbody>
</table>
MCQ WORKSHEET-I
CLASS VII: CHAPTER - 14
SYMMETRY

1. Which of the followings has both horizontal as well as vertical line of symmetry:
   (a) S  (b) A  (c) U  (d) H

2. The mirror image of ‘W’, when the mirror is placed vertically:
   (a) V  (b) M  (c) Σ  (d) W

3. Number of lines of symmetry a triangle does not have:
   (a) 1  (b) 2  (c) 3  (d) 0

4. A parallelogram has ______ lines of symmetry:
   (a) 0  (b) 1  (c) 2  (d) 3

5. Which of the following alphabets has line symmetry ?
   (a) P  (b) Z  (c) A  (d) Q

6. How many lines of symmetries are there in an equilateral triangle?
   (a) 1  (b) 2  (c) 3  (d) 4

7. Which of the following letters have reflection line of symmetry about vertical mirror?
   (a) B  (b) C  (c) V  (d) Q

8. How many lines of symmetries are there in an isosceles triangle ?
   (a) 1  (b) 2  (c) 3  (d) 4

9. How many lines of symmetries are there in a rhombus?
   (a) 1  (b) 2  (c) 3  (d) 4

10. How many lines of symmetries are there in a square?
    (a) 1  (b) 2  (c) 3  (d) 4

11. How many lines of symmetries are there in regular pentagon?
    (a) 1  (b) 2  (c) 3  (d) 4

12. How many lines of symmetries are there in rectangle?
    (a) 1  (b) 2  (c) 3  (d) 4

13. Find the number of lines of symmetry of the following figure:
    (a) 1  (b) 2  (c) 3  (d) 4

14. Find the number of lines of symmetry of the following figure:
    (a) 1  (b) 2  (c) 3  (d) 4
MCQ WORKSHEET-II

CLASS VII: CHAPTER - 14

SYMMETRY

1. Find the number of lines of symmetry in regular hexagon.
   (a) 1       (b) 2       (c) 3       (d) 4

2. Letter ‘A’ of the English alphabet have reflectional symmetry (i.e., symmetry related to mirror reflection) about.
   (a) a vertical mirror   (b) a horizontal mirror   (c) both (a) and (b)   (d) none of these

3. Letter ‘B’ of the English alphabet have reflectional symmetry (i.e., symmetry related to mirror reflection) about.
   (a) a vertical mirror   (b) a horizontal mirror   (c) both (a) and (b)   (d) none of these

4. Letter ‘C’ of the English alphabet have reflectional symmetry (i.e., symmetry related to mirror reflection) about.
   (a) a vertical mirror   (b) a horizontal mirror   (c) both (a) and (b)   (d) none of these

5. Letter ‘D’ of the English alphabet have reflectional symmetry (i.e., symmetry related to mirror reflection) about.
   (a) a vertical mirror   (b) a horizontal mirror   (c) both (a) and (b)   (d) none of these

6. Letter ‘E’ of the English alphabet have reflectional symmetry (i.e., symmetry related to mirror reflection) about.
   (a) a vertical mirror   (b) a horizontal mirror   (c) both (a) and (b)   (d) none of these

7. Letter ‘E’ of the English alphabet have reflectional symmetry (i.e., symmetry related to mirror reflection) about.
   (a) a vertical mirror   (b) a horizontal mirror   (c) both (a) and (b)   (d) none of these

8. Letter ‘G’ of the English alphabet have reflectional symmetry (i.e., symmetry related to mirror reflection) about.
   (a) a vertical mirror   (b) a horizontal mirror   (c) both (a) and (b)   (d) none of these

9. Letter ‘H’ of the English alphabet have reflectional symmetry (i.e., symmetry related to mirror reflection) about.
   (a) a vertical mirror   (b) a horizontal mirror   (c) both (a) and (b)   (d) none of these

10. Letter ‘I’ of the English alphabet have reflectional symmetry (i.e., symmetry related to mirror reflection) about.
    (a) a vertical mirror   (b) a horizontal mirror   (c) both (a) and (b)   (d) none of these

11. Letter ‘M’ of the English alphabet have reflectional symmetry (i.e., symmetry related to mirror reflection) about.
    (a) a vertical mirror   (b) a horizontal mirror   (c) both (a) and (b)   (d) none of these

12. Letter ‘T’ of the English alphabet have reflectional symmetry (i.e., symmetry related to mirror reflection) about.
    (a) a vertical mirror   (b) a horizontal mirror   (c) both (a) and (b)   (d) none of these
MCQ WORKSHEET-III
CLASS VII: CHAPTER - 14
SYMMETRY

1. Find the number of lines of symmetry in the below left figure:
   (a) 1  (b) 2  (c) 3  (d) 4

2. Find the number of lines of symmetry in the above right sided figure:
   (a) 1  (b) 2  (c) 3  (d) 4

3. Find the number of lines of symmetry in the below left figure:
   (a) 1  (b) 2  (c) 3  (d) 4

4. Find the number of lines of symmetry in the above right sided figure:
   (a) 1  (b) 2  (c) 3  (d) 4

5. Find the number of lines of symmetry in a circle.
   (a) 1  (b) 2  (c) 3  (d) none of these

6. Which of the followings has no line of symmetry:
   (a) S  (b) A  (c) U  (d) H

7. Which of the followings has both horizontal as well as vertical line of symmetry:
   (a) Z  (b) B  (c) P  (d) I

8. Which letter look the same after reflection when the mirror is placed vertically.
   (a) S  (b) P  (c) Q  (d) H

9. Find the number of lines of symmetry in a scalene triangle.
   (a) 0  (b) 1  (c) 2  (d) 3

10. The order of the rotational symmetry of the parallelogram about the centre is
    (a) 0  (b) 1  (c) 2  (d) 3
11. The order of the rotational symmetry of the below left figure about the point marked ‘x’
(a) 0  (b) 1  (c) 2  (d) 3

12. The order of the rotational symmetry of the above sided right figure about the point marked ‘x’
(a) 0  (b) 1  (c) 2  (d) 3

13. The order of the rotational symmetry of the below left figure about the point marked ‘x’
(a) 0  (b) 1  (c) 2  (d) 3

14. The order of the rotational symmetry of the above sided right figure about the point marked ‘x’
(a) 0  (b) 1  (c) 2  (d) 3

15. The order of the rotational symmetry of the below left figure about the point marked ‘x’
(a) 0  (b) 1  (c) 2  (d) 3

16. The order of the rotational symmetry of the above sided right figure about the point marked ‘x’
(a) 0  (b) 1  (c) 2  (d) 3
PRACTICE QUESTIONS
CLASS VII: CHAPTER - 14
SYMMETRY

1. Find the number of lines of symmetry of the following figures:

- Equilateral Triangle
- Square
- Regular Pentagon
- Regular Hexagon

2. Given the line(s) of symmetry, find the other hole(s):

3. The following figures have more than one line of symmetry. Such figures are said to have multiple lines of symmetry.

Identify multiple lines of symmetry, if any, in each of the following figures:
4. State the number of lines of symmetry for the following figures:
   (a) An equilateral triangle  (b) An isosceles triangle  (c) A scalene triangle  (d) A square
   (e) A rectangle  (f) A rhombus  (g) A parallelogram  (h) A quadrilateral  (i) A regular hexagon
   (j) A circle

5. What letters of the English alphabet have reflectional symmetry (i.e., symmetry related to mirror reflection) about?
   (a) a vertical mirror  (b) a horizontal mirror  (c) both horizontal and vertical mirrors

6. Give the order of the rotational symmetry for an equilateral triangle?

7. How many positions are there in above figures at which the triangle looks exactly the same, when rotated about its centre by 120°?

8. Which of the following shapes have rotational symmetry about the marked point.

9. Fill in the blanks:

<table>
<thead>
<tr>
<th>Shape</th>
<th>Centre of Rotation</th>
<th>Order of Rotation</th>
<th>Angle of Rotation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Square</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rectangle</td>
<td></td>
<td></td>
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<tr>
<td>Rhombus</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Equilateral Triangle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular Hexagon</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Circle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semi-circle</td>
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<td></td>
</tr>
</tbody>
</table>

10. Name any two figures that have both line symmetry and rotational symmetry.

11. Name the quadrilaterals which have both line and rotational symmetry of order more than 1.

12. After rotating by 60° about a centre, a figure looks exactly the same as its original position. At what other angles will this happen for the figure?
13. Give the order of the rotational symmetry of the given figures about the point marked ‘x’

(i) 
(ii) 
(iii) 

(a) 
(b) 
(c) 
(d) 
(e) 
(f) 
(g) 
(h) 

14. Some of the English alphabets have fascinating symmetrical structures. Complete the following with ‘Yes’ or ‘No’

<table>
<thead>
<tr>
<th>Alphabet Letters</th>
<th>Line Symmetry</th>
<th>Number of Lines of Symmetry</th>
<th>Rotational Symmetry</th>
<th>Order of Rotational Symmetry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z</td>
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<tr>
<td>S</td>
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<tr>
<td>C</td>
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</tr>
</tbody>
</table>

15. Draw, wherever possible, a rough sketch of

(i) a triangle with both line and rotational symmetries of order more than 1.
(ii) a triangle with only line symmetry and no rotational symmetry of order more than 1.
(iii) a quadrilateral with a rotational symmetry of order more than 1 but not a line symmetry.
(iv) a quadrilateral with line symmetry but not a rotational symmetry of order more than 1.
16. Find the number of lines of symmetry of the following figures:
17. Give the order of the rotational symmetry of the given figures about the point marked ‘x’
MCQ WORKSHEET-I

CLASS VII: CHAPTER - 15
VISUALIZING SOLID SHAPES

1. Two cubes of dimensions 2 cm x 2 cm x 2 cm are placed side by side, the length of resulting Cuboid is–
   (a) 2 cm  (b) 3 cm  (c) 4 cm  (d) 6 cm

2. The vertical cut of a brick will show the cross section is –
   (a) Rectangle  (b) Pentagon  (c) Triangle  (d) None

3. Cuboid is an example of –
   (a) 2-D Shape  (b) 3-D Shape  (c) Both (a) & (b)  (d) None

4. Which one is a 3D shape?
   (a) Rectangle  (b) circle  (c) cube  (d) square

5. A cuboid has _______ rectangular faces.
   (a) 4  (b) 6  (c) 8  (d) 12

6. A cuboid has _______ edges.
   (a) 4  (b) 6  (c) 8  (d) 12

7. A cuboid has _______ vertices.
   (a) 4  (b) 6  (c) 8  (d) 12

8. The number of faces of a cylinder is _______.
   (a) 1  (b) 6  (c) 2  (d) 3

9. The number of faces of a cube is _______.
   (a) 1  (b) 6  (c) 2  (d) 3

10. The number of faces of a cone is _______.
    (a) 1  (b) 6  (c) 2  (d) 3

11. The number of faces of a sphere is _______.
    (a) 1  (b) 6  (c) 2  (d) 3

12. The number of vertices of a cube is _______.
    (a) 4  (b) 6  (c) 8  (d) 12

13. The number of vertices of a cone is _______.
    (a) 1  (b) 6  (c) 2  (d) 3

14. The number of faces of a triangular prism is _______.
    (a) 4  (b) 5  (c) 6  (d) none of these

15. The number of faces of a square pyramid is _______.
    (a) 4  (b) 5  (c) 6  (d) none of these

______________________________________________________________

Prepared by: M. S. KumarSwamy, TGT(Maths)
MCQ WORKSHEET-II
CLASS VII: CHAPTER - 15
VISUALIZING SOLID SHAPES

1. The number of faces of a triangular pyramid or tetrahedron is _______.
   (a) 4  (b) 5  (c) 6  (d) none of these

2. The number of triangular faces of a triangular prism is _______.
   (a) 1  (b) 4  (c) 2  (d) 3

3. The number of rectangular faces of a triangular prism is _______.
   (a) 1  (b) 4  (c) 2  (d) 3

4. The number of triangular faces of a rectangular pyramid is _______.
   (a) 1  (b) 4  (c) 2  (d) 3

5. The number of rectangular faces of a rectangular pyramid is _______.
   (a) 1  (b) 4  (c) 2  (d) 3

6. The number of edges of a triangular prism is _______.
   (a) 6  (b) 8  (c) 9  (d) 12

7. The number of edges of a square pyramid is _______.
   (a) 6  (b) 8  (c) 9  (d) 12

8. The number of edges of a triangular pyramid is _______.
   (a) 6  (b) 8  (c) 9  (d) 12

9. The number of edges of a rectangular pyramid is _______.
   (a) 6  (b) 8  (c) 9  (d) 12

10. The number of faces of a triangular prism is _______.
    (a) 6  (b) 8  (c) 4  (d) 5

11. The number of faces of a triangular pyramid is _______.
    (a) 6  (b) 8  (c) 4  (d) 5

12. The number of faces of a square pyramid is _______.
    (a) 6  (b) 8  (c) 4  (d) 5

13. The number of faces of a rectangular prism is _______.
    (a) 6  (b) 8  (c) 4  (d) 5

14. The corners of a solid shape are called its _______.
    (a) vertices  (b) edges  (c) faces  (d) net

15. A _______ is a skeleton-outline of a solid that can be folded to make it
    (a) vertices  (b) edges  (c) faces  (d) net
MCQ WORKSHEET-III
CLASS VII: CHAPTER - 15
VISUALIZING SOLID SHAPES

1. What will be the number of faces if there are 6 vertices and 12 edges?
   (a) 8          (b) 10          (c) 12          (d) 18

2. What will be the number of edges if there are 12 vertices and 20 faces?
   (a) 32         (b) 28         (c) 30         (d) 42

3. Which of the following is Euler’s Formula:
   (a) \( F + V - E = 2 \)  \( (b) F + V = E - 2 \)  \( (c) F - V = E - 2 \)  \( (d) F - V + E = 2 \)

4. Name of the solid given below left figure.
   (a) Cylinder    (b) Cone    (c) Sphere    (d) Cuboid

5. Name of the solid given above sided right figure.
   (a) Cylinder    (b) Cone    (c) Sphere    (d) Cuboid

6. Name of the solid given below left figure.
   (a) Cylinder    (b) Cone    (c) Sphere    (d) Cuboid

7. Name of the solid given above sided right figure.
   (a) Cylinder    (b) Cone    (c) Sphere    (d) Cuboid

8. Name of the solid given below left figure.
   (a) Pyramid    (b) Cone    (c) Cube    (d) Cuboid

9. Name of the solid given above sided right figure.
   (a) Pyramid    (b) Cone    (c) Cube    (d) Cuboid
10. Name of the solid whose net diagram is given in below left figure.
   (a) Pyramid   (b) Cone   (c) Cube   (d) Cuboid

![Net Diagram](image)

11. Name of the solid whose net diagram is given in above sided right figure.
   (a) Pyramid   (b) Cone   (c) Cube   (d) Cuboid

![Net Diagram](image)

12. Name of the solid whose net diagram is given in below left figure.
   (a) Cylinder   (b) Cone   (c) Sphere   (d) Cuboid

![Net Diagram](image)

13. Name of the solid whose net diagram is given in above sided right figure.
   (a) Cylinder   (b) Cone   (c) Sphere   (d) Cuboid

![Net Diagram](image)

14. Two dice are placed side by side with 5 + 6, what is the total on the face opposite to the given numbers
   (a) 3   (b) 7   (c) 11   (d) 6

15. Two dice are placed side by side with 4 + 3, what is the total on the face opposite to the given numbers
   (a) 3   (b) 7   (c) 11   (d) 6
MCQ WORKSHEET-IV
CLASS VII: CHAPTER - 15
VISUALIZING SOLID SHAPES

1. Two dice are placed side by side with 2 + 1, what is the total on the face opposite to the given numbers
   (a) 3  
   (b) 7  
   (c) 11 
   (d) 6

2. Two dice are placed side by side with 6 + 2, what is the total on the face opposite to the given numbers
   (a) 3  
   (b) 7  
   (c) 11 
   (d) 6

3. Two dice are placed side by side with 5 + 2, what is the total on the face opposite to the given numbers
   (a) 3  
   (b) 7  
   (c) 11 
   (d) 6

4. What cross-sections do you get when you give a vertical cut to the brick?
   (a) rectangle  
   (b) square  
   (c) circle  
   (d) triangle

5. What cross-sections do you get when you give a vertical cut to the round apple?
   (a) rectangle  
   (b) square  
   (c) circle  
   (d) triangle

6. What cross-sections do you get when you give a vertical cut to a die?
   (a) rectangle  
   (b) square  
   (c) circle  
   (d) triangle

7. What cross-sections do you get when you give a vertical cut to the circular pipe?
   (a) rectangle  
   (b) square  
   (c) circle  
   (d) triangle

8. What cross-sections do you get when you give a vertical cut to an ice-cream cone?
   (a) rectangle  
   (b) square  
   (c) circle  
   (d) triangle

9. What cross-sections do you get when you give a horizontal cut to the brick?
   (a) rectangle  
   (b) square  
   (c) circle  
   (d) triangle

10. What cross-sections do you get when you give a horizontal cut to the round apple?
    (a) rectangle  
    (b) square  
    (c) circle  
    (d) triangle

11. What cross-sections do you get when you give a horizontal cut to a die?
    (a) rectangle  
    (b) square  
    (c) circle  
    (d) triangle

12. What cross-sections do you get when you give a horizontal cut to the circular pipe?
    (a) rectangle  
    (b) square  
    (c) circle  
    (d) triangle

13. What cross-sections do you get when you give a horizontal cut to an ice-cream cone?
    (a) rectangle  
    (b) square  
    (c) circle  
    (d) triangle

14. What cross-sections do you get when you give a horizontal cut to cricket ball?
    (a) rectangle  
    (b) square  
    (c) circle  
    (d) triangle

15. What cross-sections do you get when you give a vertical cut to cylindrical base?
    (a) rectangle  
    (b) square  
    (c) circle  
    (d) triangle
1. Match the shape with the name:

(i) Cuboid

(ii) Cylinder

(iii) Cube

(iv) Sphere

(v) Pyramid

(vi) Cone
2. Match the nets with appropriate solids:

(a) 

(b) 

(c) 

(d) 

(i) 

(ii) 

(iii) 

(iv) 

3. Can this be a net for a die? Explain your answer.

4. The dimensions of a cuboid are 5 cm, 3 cm and 2 cm. Draw three different isometric sketches of this cuboid.

5. Three cubes each with 2 cm edge are placed side by side to form a cuboid. Sketch an oblique or isometric sketch of this cuboid.

6. If two cubes of dimensions 2 cm by 2cm by 2cm are placed side by side, what would the dimensions of the resulting cuboid be?

7. Two dice are placed side by side as shown: Can you say what the total would be on the face opposite to (a) 5 + 6 (b) 4 + 3 (Remember that in a die sum of numbers on opposite faces is 7)
8. Make an oblique sketch for each one of the given isometric shapes:

9. Three cubes each with 2 cm edge are placed side by side to form a cuboid. Try to make an oblique sketch and say what could be its length, breadth and height.

10. What cross-sections do you get when you give a (i) vertical cut (ii) horizontal cut to the following solids? (a) A brick (b) A round apple (c) A die (d) A circular pipe (e) An ice cream cone

11. For given solid, draw the top view, front view and side view.

12. For given solid, draw the top view, front view and side view.

13. For given solid, draw the top view, front view and side view.
14. For given solid, draw the top view, front view and side view.

A brick

15. For given solid, draw the top view, front view and side view.

A hut