

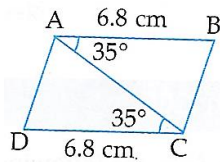
SYLLABUS : GRAND TEST

GENERAL INSTRUCTIONS : Draw Diagrams with Pencils.

- All questions are compulsory. **Maximum Marks are 60.**
- The question paper consists of 24 Questions.
- **Section – A** : Question 1 to 8 are 1mark each.
- **Section – B** : Question 9 to 16 are 2 marks each.
- **Section – C** : Question 17 to 24 are 3 marks each.
- **Section – D** : Question 25 to 32 are 4 marks each.

SECTION: A (1 ×8 = 8)

1. Give the algebraic expressions in the following cases using variables, constants and arithmetic operations:
 - (i) 5 less than the product of x and y^2
 - (ii) Number 8 added to twice the product of x and y
2. Which ratio is larger 5 : 4 or 9 : 7?
3. Find the whole quantity if:
15% of it is Rs 1800
4. ABCD is a quadrilateral and AC is a diagonal. Prove that $\Delta ABC \cong \Delta CDA$. Is $AB \parallel CD$?

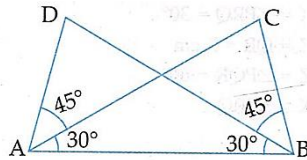


5. Draw an equilateral triangle with side 6.5 cm.
6. A horse is tied to a pole with 9.8 m long string. Find the area where the horse can graze.
7. One card is drawn from a well shuffled deck of 52 cards. What is the probability of
 - (i) Drawing an ace?
 - (ii) A face card?
8. Find the area of an isosceles right-angled triangle, if one of the equal sides is 10cm long.

SECTION:B (2× 8 = 16)

9. Evaluate each of the following algebraic expression, if $x = -1$, $y = 2$, $z = -2$
 $2x + 3y - \frac{3}{2}z$
10. A car can finish a certain journey in 12 hours at a speed of 50 Km/hr. By how much should its speed be increased so that it may take only 8 hours to cover the same distance?

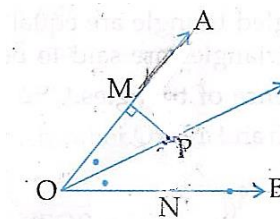
11. The price of a shirt is reduced by 15% in a discounted sale. If its present is RS 123.25, find its original price.
12. The sides of a rectangular park are in the ratio 4 : 3. If its area is 2028 sq.m, find the cost of fencing it at Rs 3 per meter.
13. Prove that $\triangle ABC \cong \triangle BAD$ in the adjoining figure:



14. Draw a line CD parallel to given line AB at a distance of 5.5 cm from it.
15. The mean of 45 numbers is 25. If each number is multiplied by 3, find the new mean.
16. How many faces, vertices, edges are in:
 - (i) Triangular pyramid
 - (ii) Square pyramid

SECTION : C (3 × 8 = 24)

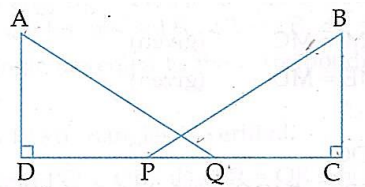
17. From the sum of $3x^2 - 6x + 8$ and $-4x^2 + 7x - 6$ subtract $6x^2 + 5x + 4$.
18. (i) Travelling 900 m by trains costs RS 225. How many will it cost if a person wishes to travel 360 Km by the train?
(ii) In a hostel of 100 boys, the food provisions is for 40 days. If 60 more boys join the hostel, how long will the provision last?
19. By selling an article for RS 3600, a man makes a profit of 20%. What is the cost price of the article? What would his gain% be if he sold the article for RS 4000.
20. Find the area of an isosceles triangle whose base is 24 cm and one of its equal sides is 13 cm. let ABC be the isosceles triangle were $AB = AC = 13$ cm.
21. P is any point on the bisector of $\angle AOB$. If $PM \perp OA$ and $PN \perp OB$. Prove that $PM = PN$



22. Construct a triangle ABC in which $AC = 6$ cm, $\angle A = 60^\circ$ and $\angle B = 90^\circ$. (use angle sum property).
23. The mean of 50 observations was 250. Later it was found out that the number 152 was wrongly copied as 102 for the computation of means. Find the correct mean.
24. Three cubes of sides 3 cm each are joined to each other in a row.
 - (i) What shape will you get?
 - (ii) Write its dimensions.
 - (iii) The new shape on joining is seen from top and side. Draw rough sketh when
 - (a) Seen from the top
 - (b) Seen from sides

SECTION : D (4 × 8 = 32)

- 25.** If $A = x^2 + xy - 6$, $B = 6xy - 2x^2 + 1$ and $c = 3x^2 + 7 - 3xy$, find
 (i) $A + B + C$ (ii) $A - B + C$
- 26.** What number must be added to each of the numbers 39, 42, 9 and 10 to get the numbers which are in proportion?
- 27.** Anil borrowed a sum of Rs 12300 for a certain period at the rate of 10% per annum and returned Rs 18450 on expiry of the time. Find the time for which money was borrowed by him.
- 28.** Two cross – roads each of 5 m run at right angles through the centre of a regular park 70 m by 50 m, such that each is parallel to one of the sides of the rectangles. Find the area of the remaining portion of the park.
- 29.** In the figure, $AD \perp CD$ and $BC \perp CD$. If $AQ = BP$ and $DP = CQ$, prove that $\angle DAQ = \angle CBP$.



- 30.** Draw a ΔPQR in which $\angle P = 120^\circ$, $PQ = PR = 4.5$ cm. Measure the other two angles.
- 31.** the result of pass percentage of class X and XII in CBSE examination for 5 years are given in the following table:

Year :	2005 – 06	2006 – 07	2007 – 08	2008 – 09	2009 – 10
X	75	95	90	85	96
XII	80	85	90	95	98

- 32.** (i) A wire circular in the shape is of radius 14 cm. if it is bent in the form of a square, find the side of the square.
 (ii) the radius of a wheel of the cycle is 35 cm. if it moves slowly on the road, how far will it go in 23 revolutions?