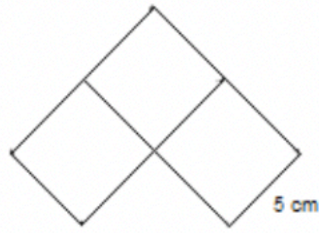


Section A
(Questions 1 to 12 carry 1 mark each)

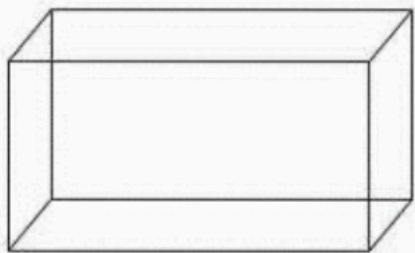
1. If there is a discount of 40% on an article costing Rs 7000, then the price after discount is
- A. Rs 4500
 - B. Rs 4200
 - C. Rs 4400
 - D. Rs 4600
2. Which of the following is the greatest rational number?
- A. $\frac{15}{7}$
 - B. $\frac{15}{8}$
 - C. $\frac{15}{10}$
 - D. $\frac{15}{12}$
3. To construct an equilateral triangle, the minimum requirement is
- A. Measure of one angle
 - B. Measure of one side
 - C. Measure of two sides
 - D. Measure of one side and one angle

figure?

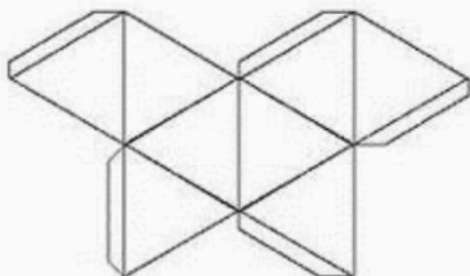


- A. 15 cm
 - B. 30 cm
 - C. 40 cm
 - D. 50 cm
5. $a \times a \times a \times a \times y \times y \times y \times y \times z \times z$ can be written as
- A. $a^4y^4z^2$
 - B. ayz^{10}
 - C. ay^8xz^2
 - D. ayz^8
6. Which of the following figure has 7 lines of symmetry?
- A. Regular hexagon
 - B. Regular octagon
 - C. Regular heptagon
 - D. Regular triangle
7. A number is chosen at random from 1 to 5. What is the probability that the number chosen is odd?
- A. $\frac{2}{5}$
 - B. $\frac{3}{5}$
 - C. $\frac{1}{4}$
 - D. $\frac{1}{6}$
8. A regular hexagon has ____ center of rotation.
- A. 1
 - B. 2
 - C. 3
 - D. 4

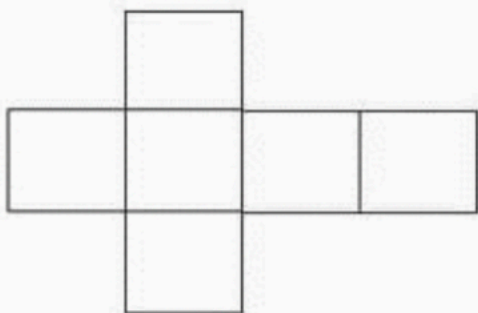
9. Net for the following solid is



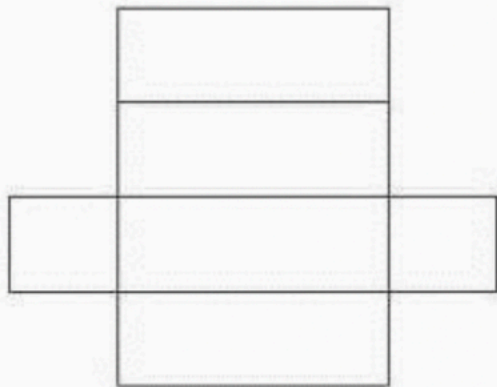
A.



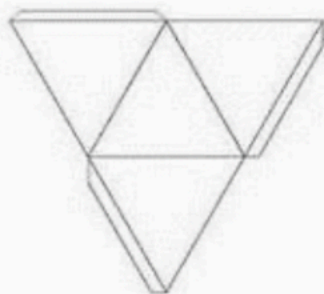
B.



C.

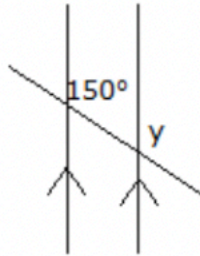


D.



10. For what value of k , we have $7x^2 - 5x + k = -4$, given that $x = -2$,
- A. 22
 - B. -42
 - C. -22
 - D. 42

11. In the figure given below, the measure of y is
- A. 30°
 - B. 120°
 - C. 130°
 - D. 150°

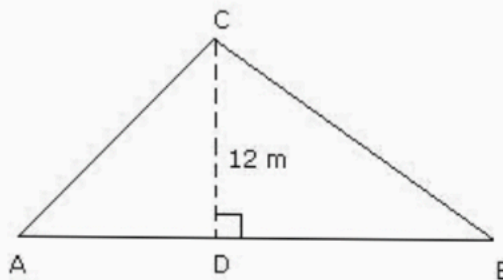


12. $-5 + 9 + (-5) + (-10) + (1)$ is equal to
- A. 13
 - B. -13
 - C. -10
 - D. 10

Section B

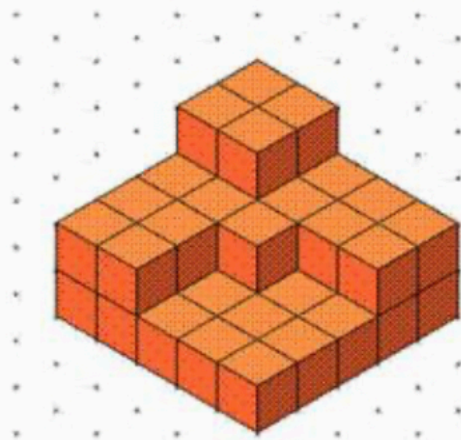
(Questions 13 to 24 carry 2 marks each)

13. If $\frac{2x-1}{3} = \frac{x+2}{2}$, then find the value of x .
14. A family reduced the consumption of sugar from 10 kg to 8 kg per month due to increase in price. Find the percentage decrease in consumption.
15. Write the rational form of the decimal and represent it on a number line:
(i) -0.25 (ii) 0.8
16. Find AB, if the area of the triangle ABC is 48 m^2 and the height CD is 12 m.

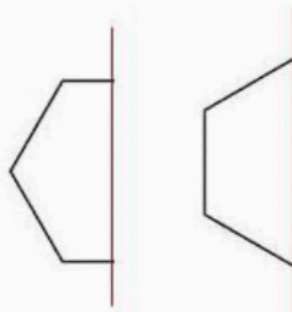


17. Simplify: $3(a + b) - 2(2a - b) + 4a - 7$.

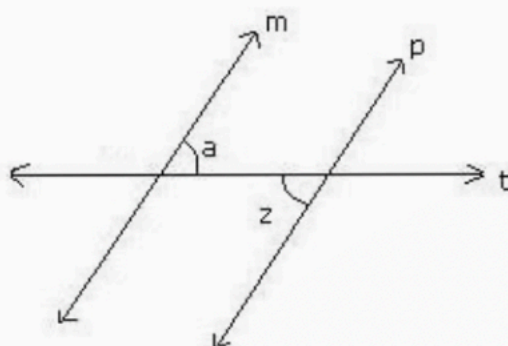
18. If $5^{2x+1} \div 25 = 125$, find the value of x .
19. Give an example of an alphabet which has 2 lines of symmetry as well as rotational symmetry of order 2.
20. Count the number of unit cubes in the following solid.



21. Complete the following images whose one half and axis of symmetry is given.



22. Express the following numbers in exponent form.
 (i) 343000 (ii) 2048
23. A farmer sold $\frac{3}{5}$ of his $56\frac{1}{2}$ tons of hay. How many tons of hay did he sell?
24. In the figure below, lines m and p are parallel; t is a transversal.
 If $\angle a = 57^\circ$, then find $\angle z$.

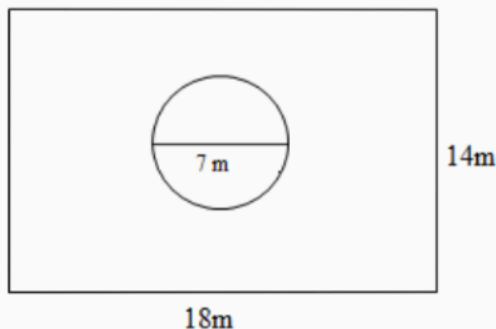


34. Simplify:

(i) $\frac{a^2 \times a^3 \times b^3 \times b^4}{a^5 \times b^2}$

(ii) $\left(\frac{a^3}{b^4}\right)^2 \times \left(\frac{b^2}{a^3}\right)^3$

35. The given figure represents a rectangular lawn with a circular fountain in the centre. The dimensions of the lawn are 18 m \times 14 m and the diameter of the fountain is 7 m. Find the area of the lawn excluding the flower bed area.



36. The percentage profit earned by selling an article for Rs. 1920 is equal to the percentage loss incurred by selling the same article for Rs. 1280. At what price should the article be sold to make 25% profit?
37. If the sum of the sides of a right triangle is 49 inches and the hypotenuse is 41 inches, find the two sides.

28. In triangle ABC, $AC = 10$ cm, $BC = 4$ cm and $AD = 6$ cm. Find the length of BL .

