



MANVI PUBLIC SCHOOL

Subject : Mathematics

Worksheet

Class :VIII

1. Answer the following questions:

- (a) Write a Pythagorean triplet whose smallest member is 8.
- (b) How many sides does a regular polygon have if each of its exterior angle is 24° ?
- (c) On selling a table for Rs. 987 Ramesh loses 6%. For how much did he purchased it?
- (d) Evaluate using identities: 10.5×9.5
- (e) State the Euler's Formula. What will be the number of edges if there are 12 vertices and 20 faces?

2. I have a total of Rs. 300 in coins of denominations Re 1, Rs 2, and Rs 5. The number of Rs 2 coins is three times the number of Rs 5 coins. The total number of coins is 160. How many coins of each denomination are with me?

3. A card is drawn randomly from a pack of 52 cards. Find the probability that the card drawn is:

- (a) A black king
- (b) Seven of hearts
- (c) A red card
- (d) a jack, queen or king

4. Find the square root of 6.0516. Find the least number which must be subtracted from 3250 to make it a perfect square.

5. Factorize the following expressions:

- (a) $a^4 - 81$
- (b) $3x^2 - 14x + 8$
- (c) $39y^3(50y^2 - 98) \div 26y^2(5y + 7)$
- (d) $a^2 - 2ab + b^2 - c^2$

6. A group of three friends staying together consume 54kg of wheat every month. Some more friends join this group and they find that the same amount of wheat lasts 18 days. How many new members are there in the group now?

7. Simplify: (a) $\frac{3^{-5} \times 10^{-5} \times 125}{5^{-7} \times 6^{-5}}$

(b) $(\frac{2}{5})^{-3} \times (\frac{5}{2})^{-15} = (\frac{2}{5})^{2+3x}$

8. Three angles of a quadrilateral are in the ratio 3:4:5. The difference of the least and the greatest of these angles is 45° . Find the all the angles of the quadrilateral.

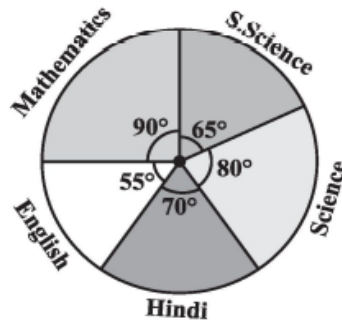
9. A shopkeeper purchased 200 bulbs for Rs 10 each. However, 5 bulbs were fused and had to be thrown away. The remaining were sold at Rs. 12 each. Find the gain or loss%.

10. Solve: $\frac{3x+2}{7} + \frac{4(x+1)}{5} = \frac{2}{3}(2x+1)$

11.

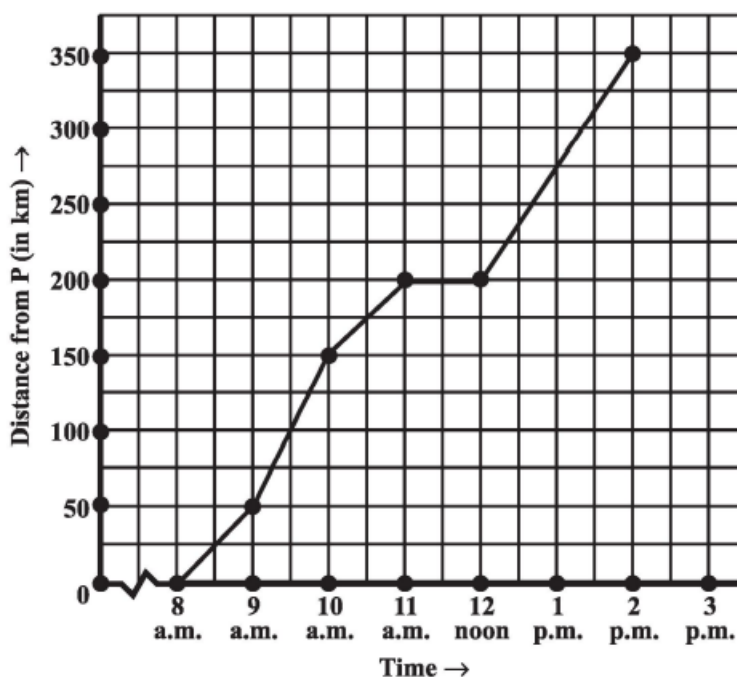
The adjoining pie chart gives the marks scored in an examination by a student in Hindi, English, Mathematics, Social Science and Science. If the total marks obtained by the students were 540, answer the following questions.

- (i) In which subject did the student score 105 marks?
- (ii) How many more marks were obtained by the student in Mathematics than in Hindi?
- (iii) Examine whether the sum of the marks obtained in Social Science and Mathematics is more than that in Science and Hindi.

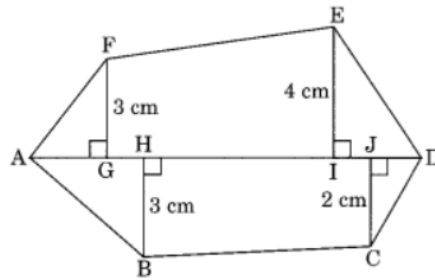


12. The given graph describes the distances of a car from a city P at different times when it is travelling from City P to City Q, which are 350km apart. Study the graph and answer the following questions:

- (a) What information is given on the two axes?
- (b) From where and when did the car begin its journey?
- (c) How far did the car go in the first hour?
- (d) How far did the car go during the third hour?
- (e) Was the speed same during the first 3 hours? How do you know it?
- (f) Did the car stop for some duration at any place? Justify your answer.
- (g) When did the car reach City Q?



13. (a) Find the area of the hexagon ABCDEF given below. Given that: AD = 8 cm, AJ = 6 cm, AI = 5 cm, AH = 3 cm, AG = 2.5 cm and FG, BH, EI and CJ are perpendiculars on diagonal AD from the vertices F, B, E and C respectively.



(b) A cuboidal box of dimensions 1 m × 2 m × 1.5 m is to be painted except its bottom. Calculate how much area of the box has to be painted.

14. (a) Calculate the amount and compound interest for Rs.20000 for 3 years at 8% per annum compounded annually.

(b) If $(x - \frac{1}{x}) = 3$, find $(x^2 + \frac{1}{x^2})$ and $(x^4 + \frac{1}{x^4})$

(c) In the given figures, ABCD is a parallelogram. Find x, y, z.

