

SAI TUTORIALS

Mathematics

Marks: 40

Std.: 8 (English)

Date: 18-10-23

SEM-1 SVPV, PAULS, COSMO

Time: 2 HR

Chapter: 1,2,3,4,5,6,7,8,9

Q.1 multiple choice questions

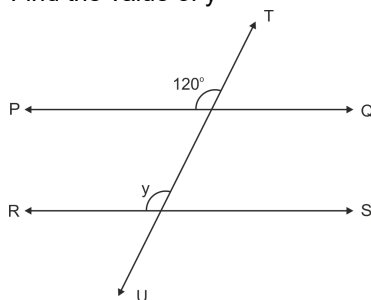
6

- When a number is multiplied by itself three times the product so obtained is called of that number.
a. cube b. square c. cube root d. square root
- The orthocentre of an obtuse angled triangle is in the of the triangle.
a. interior b. exterior
c. vertex d. none of these
- 20 people can make a wall in 12 days. How many days will 16 people take to build the wall.
a. 5 days b. 10 days c. 15 days d. 20 days
- If $a < b$ then $-a > -b$
a. True b. False
- $(8 - x)^3 = \dots\dots\dots$
a. $512 - x^3 + 192x - 24x^2$
b. $512 - x^3 - 192x + 24x^2$
c. $512 + x^3 + 192x + 24x^2$
d. $512 - x^3 - 192x - 24x^2$
- $a^2 + 10a + 25$
a. $(a - 5)(a - 5)$ b. $(a + 5)(a + 5)$
c. $(a - 5)(a + 5)$ d. All of these

Q.2 Answer the following (Any Four)

4

- If marked price = Rs. 1700, selling price = Rs. 1540, then find the discount.
- Expand
 $(m - 4)(m + 6)$
- Draw an acute angled $\triangle PQR$. Draw all of its altitudes. Name the point of concurrence as 'O'.
- Write in the form of nth root of 'a' in each of the following
 $(28)^{\frac{1}{2}}$
- Find the value of y



Q.3 Solve the following (Any Three)

6

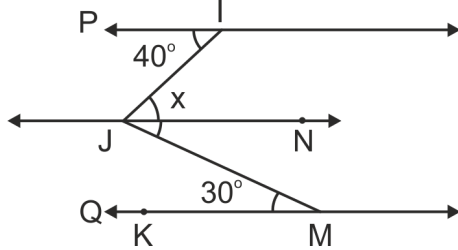
- Find the length of diagonal of a square with side 8 cm
- John sold books worth rupees 4500 for a publisher. For this he received 15% commission. Complete the following activity to find the total commission John obtained.
- Compare the following numbers.
 $\frac{-25}{8}$, $\frac{-9}{4}$

- 4 Draw an isosceles triangle. Draw all of its medians and altitudes. Write your observation about their points of concurrence.

Q.4 Solve the following(Any Three)

9

- 1 y varies directly as square root of x . when $x = 16$, $y = 24$. Find the constant of variation and equation of variation.
- 2 In the given figure line $p \parallel$ line $l \parallel$ line q . Find $\angle x$ with the help of measures given in the figure.

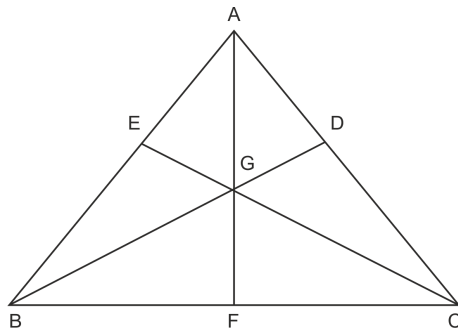


- 3 Draw an obtuse angled $\triangle LMN$. Draw its altitudes and denote the orthocentre by 'O'.
- 4 Show the following numbers on a number line. Draw, a separate number line for each example.
 $\frac{7}{5}$, $-\frac{2}{5}$, $-\frac{4}{5}$

Q.5 Answer the following(Any Three)

12

1



G is the centroid of triangle ABC. Find $\ell(GD)$, $\ell(EG)$ and $\ell(AG)$.

$\ell(BG) = 6 \text{ cm}$, $\ell(GC) = 9 \text{ cm}$, $\ell(FG) = 5 \text{ cm}$

- 2 Simplify
 $(5x - 7y)^3 + (5x + 7y)^3$
- 3 120 bags half litre milk can be filled by a machine within 3 minutes find the time to fill such 1800 bags.
- 4 Show the number $\sqrt{7}$ on the number line

Q.6 Answer the following(Any One)

3

- 1 Write the following rational numbers in decimal form.
 $-\frac{11}{13}$
- 2 Rita purchased 3 tables at 900 each, 2 chairs at 750 each and 5 benches at 500 each. Shopkeeper offered 20% rebate. How much did Rita pay.