

ADITYA TALENT SCHOOL

X CLASS

DAILY EXAM

Dt : 14-04-2020

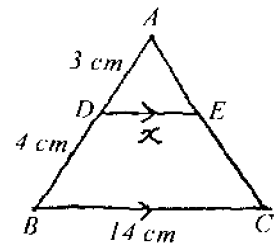
MATHEMATICS - 2 (25 MARKS)

SECTION - I

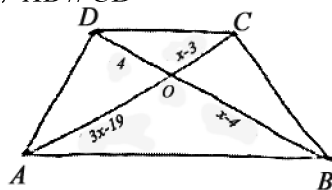
$1\frac{1}{2}$ mark questions.

$20 \times 1\frac{1}{2} = 10$

1. If the side of a rhombus is 5 cm and one of the diagonals is 6 cm, then the length of the second diagonal is
2. If D, E and F are the midpoints of the sides $\overline{BC}, \overline{CA}$ and \overline{AB} of $\triangle ABC$ respectively, then $ar(\triangle DEF) : ar(\triangle ABC) = \dots\dots\dots$
3. If 'O' is a point in the interior of rectangle $ABCD$, then $OB^2 + OD^2 = \dots\dots\dots$

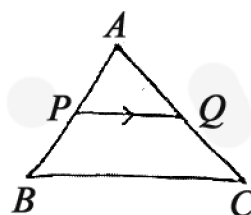


4. In the adjacent figure, if $\overline{DE} \parallel \overline{BC}$, then $x = \dots\dots\dots$
5. Are any two rectangles similar ?
6. The length of the hypotenuse of an isosceles right triangle, whose side is $4\sqrt{2}$ cm is
7. If $\triangle ABC \sim \triangle PQR$, $\angle A = 32^\circ$ and $\angle R = 65^\circ$, then $\angle B = \dots\dots\dots$
8. In the given figure, $\overline{AB} \parallel \overline{CD}$. If $OA = 3x - 19$, $OB = x - 4$, $OC = x - 3$ and $OD = 4$ cm, then



$x = \dots\dots\dots$

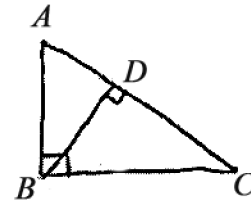
9. If the ratio of the corresponding sides of two similar triangles is 5:3, then the ratio of their areas is
10. In $\triangle ABC$, if $\overline{AD} \perp \overline{BC}$ and $AD^2 = BD \times DC$, then $\angle BAC = \dots\dots\dots$
11. In $\triangle ABC$, $\overline{PQ} \parallel \overline{BC}$ and \overline{PQ} divides $\triangle ABC$ into two parts of equal area, then $BP : AB = \dots\dots\dots$



12. If in a right $\triangle ABC$, right angled at C , P and Q are the points on \overline{CA} and \overline{CB} respectively such that $CQ:QB=2:1$ and $CP:PA=2:1$, then $9(AQ^2 + BP^2) = \dots\dots\dots$

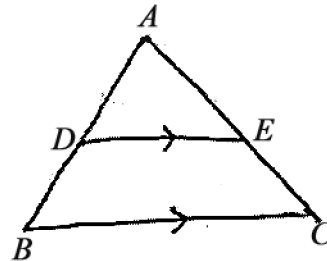
13. In two triangles ABC and PQR , $\frac{AB}{QR} = \frac{AC}{PQ} = \frac{BC}{PR}$, then $\triangle ABC \sim \triangle \dots\dots\dots$

14. In $\triangle ABC$, $\angle B=90^\circ$ and $\overline{BD} \perp \overline{AC}$, then $AD \times AC = \dots\dots\dots$

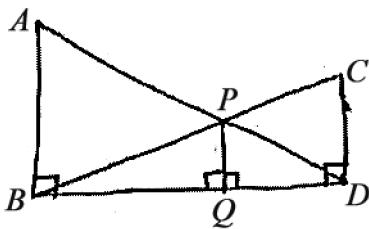


15. In the given figure, $\overline{DE} \parallel \overline{BC}$. If $AD=1.5\text{ cm}$, $BD=2AD$, then the

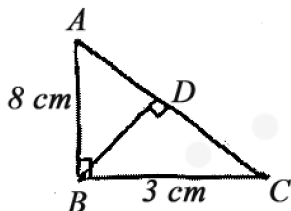
$ar(\triangle ADE) : ar(\text{trap } BCED) = \dots\dots\dots$



16. In the given figure, $\overline{AB} \parallel \overline{PQ} \parallel \overline{CD}$. If $AB = 6\text{ cm}$, $PQ = 2\text{ cm}$, then $CD = \dots\dots\dots\text{ cm}$

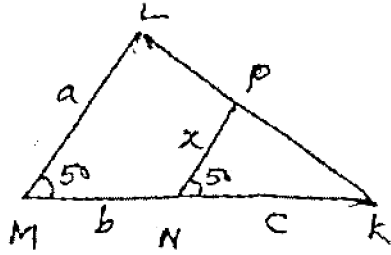


17. In $\triangle ABC$, $\angle B=90^\circ$ and $\overline{BD} \perp \overline{AC}$, then $BD \times AC = \dots\dots\dots\text{ cm}^2$.

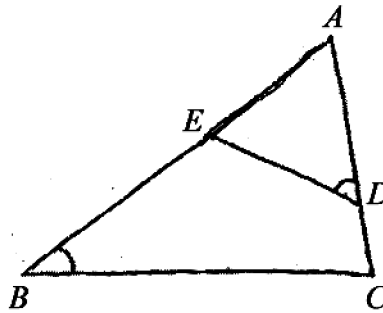


18. If the angles in a triangle are in the ratio $1:2:3$, then their corresponding opposite sides are in the ratio $\dots\dots\dots$

19. In the given figure, the value of x in the terms of a, b and c is



20. In the given figure, if $\angle ADE = \angle B$, $AE = 8.6 \text{ cm}$, $AD = 6.8 \text{ cm}$, $BE = 2.4 \text{ cm}$ and $BC = 5.5 \text{ cm}$, then $DE =$



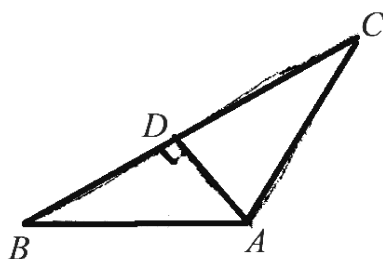
SECTION - II

1 mark questions.

15 x 1 = 15

21. Define 'similar triangles'.
22. State 'Pythagorean theorem'.
23. Write any two examples of 'similar figures'.
24. Write the relation between the sides and diagonals of a rhombus $ABCD$.
25. State 'Converse of Basic Proportionality Theorem'.
26. If $ABCD$ is a trapezium in which $\overline{AB} \parallel \overline{CD}$ and two diagonals \overline{AC} and \overline{BD} intersect at O , then prove that $\frac{AO}{OC} = \frac{BO}{OD}$.
27. Prove that a line drawn through the midpoint of one side of a triangle parallel to another side bisects the 3rd side.
28. A person 1.65 m tall casts 1.8 m shadow. At the same instance, a lamp post casts a shadow of 5.4 m. Find the height of the lamp post.
29. Prove that if areas of two similar triangles are equal, then they are congruent.
30. $\triangle ABC \sim \triangle DEF$ and their areas are 64 cm^2 and 121 cm^2 respectively. If $EF = 15.4 \text{ cm}$, then find BC .

31. The areas of two similar triangles are 81 cm^2 and 49 cm^2 respectively. If the altitude of the bigger triangle is 4.5 cm , find the corresponding altitude of the smaller triangle.
32. A ladder 25 m long reaches a window of building 20 m above the ground. Determine the distance of the foot of the ladder from the building.
33. In $\triangle ACB$, $\angle C = 90^\circ$ and $\overline{CD} \perp \overline{AB}$, then prove that $\frac{BC^2}{AC^2} = \frac{BD}{AD}$.
34. A ladder 15 m long reaches a window which is 9 m above the ground on one side of a street. Keeping its foot at the same point, the ladder is turned to other side of the street to reach a window 12 m high. Find the width of the street.
35. In the figure, if $\overline{AD} \perp \overline{BC}$, then prove that $AB^2 + CD^2 = BD^2 + AC^2$



GENERAL SCIENCE - 2 (25 MARKS)

SECTION - I

$1/2$ mark questions.

$20 \times 1/2 = 10$

1. Ecological pyramid was introduced by.....
2. Name the fish affected in Hyderabad water reservoir.....
3. Minimata disease was caused due to the toxic chemical.....
4. Chinese Sparrow campaign was held in the year.....
5. Flap like structure present on larynx.....
6. Structural and functional unit of lungs.....
7. Muscle cramps is due to the accumulation of.....
8. Amount of energy released by 1 ATP molecule.....
9. Respiration by skin is called.....
10. In which cell organelle energy is stored.....
11. Cellular respiration in prokaryotic cells takes place in.....
12. Food chain always starts with.....
13. What is added to the yeast suspension to check that oxygen is removed

14. What plays a major role in respiration in men
15. Expand BOD
16. Which plants are grown by farmers along with Mirchi?
17. Which state stands first in utilising solar energy?
18. Examples for non-renewable resources?
19. What has to be followed to conserve natural resources?
20. Which ecological pyramid is always upright

SECTION - II

1 mark questions.

15 x 1 = 15

21. How trachea are prevented from collapsing?
22. Mention the various respiratory organs in a plant.
23. What is the path taken by air to reach human lungs?
24. What is pleura? what is their function?
25. What is the percentage of gases in the expired air?
26. How do plants living in marshes and mangroves breathe?
27. What is the difference between bio magnification and bioaccumulation?
28. In which ecosystem pyramid of biomass is inverted?
29. Mention any two bio friendly methods of pest control
30. What is tidal volume?
31. What was produced by combustion according to Lavoisier?
32. Which product is produced by skeletal muscles under anaerobic respiration?
33. Define the term niche?
34. Why alveoli are small in size and numerous in number?
35. Name the producer and primary consumer in aquatic food chain?