

INDIAN SCHOOL AL WADI AL KABIR

Class VII, Mathematics (2023-24)

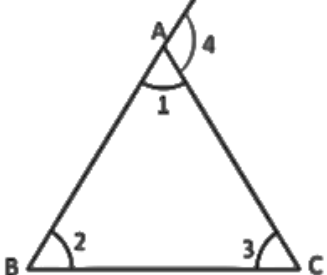
Worksheet DTQ – Triangle and its Properties

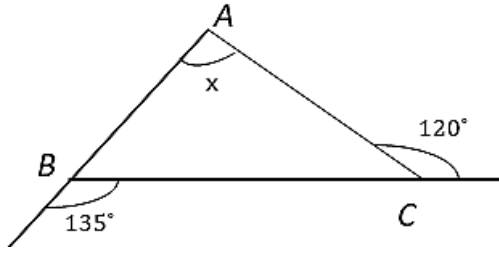
SHORT ANSWER TYPE QUESTIONS- 7 QUESTIONS. (2 Marks each)

Q1. One of the angles of a triangle has measure 70° and other two angles are equal. Find the two equal angles.

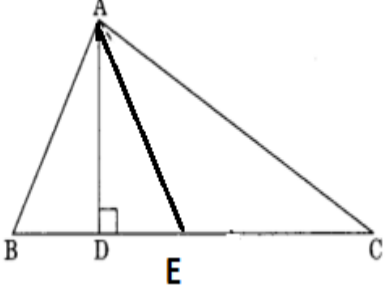
Q2. One of the acute angles of a right triangle is 42° . Find the other angle.

Q3. Is it possible to draw a triangle with sides 6.5 cm, 2.5 cm, 3 cm. State the reason.

Q4.  In the adjoining figure if $\angle 2$ and $\angle 3$ are 60° and 65° respectively, find $\angle 4$ and $\angle 1$.

Q5.  Find the unknown angle x in the adjoining figure.

Q6. The sides of a triangle have lengths 10 cm, 6 cm and 'a', where a is a whole number. The value of a lies between which two measures?

Q7.  If E is the midpoint of BC , identify the median and altitude of triangle ABC .

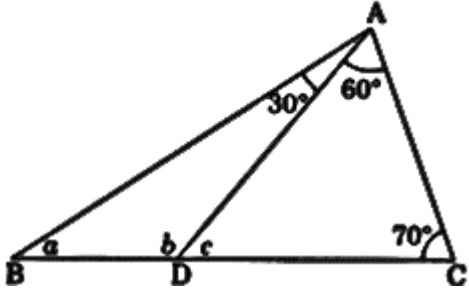
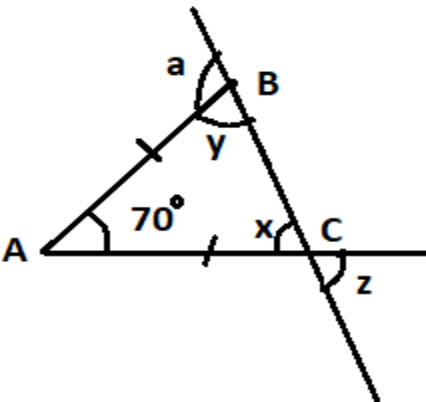
SHORT ANSWER TYPE- 5 QUESTIONS. (3 Marks each)

Q8. The sides of a triangle are in the ratio 3:4:5. State whether the triangle is a right-angled triangle or not. Show required steps and property used.

Q9. One of the equal angles of an isosceles triangle is 50° . Find all the angles of the triangle.

Q10. Find the perimeter of a rectangle with breadth 5 cm and diagonal of measure 13 cm.

Q11. The angles of a triangle are arranged in ascending order of magnitude. If the difference between two consecutive angles is 5° , find the three angles.

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| Q12. | Using Pythagoras property, find the length of the second diagonal of a rhombus whose side is 5 cm and one of the diagonals is 6 cm. |
| LONG ANSWER TYPE- 3 QUESTIONS. (4 Marks each) | |
| Q13. |  <p style="text-align: right;">Find the value of a, b, and c</p> |
| Q14. |  <p style="text-align: right;">In the adjoining figure, $AB=AC$. Find the value of x, y, z and a. Show proper steps with properties applied.</p> |
| Q15. | Height of a pole is 9 m. Find the length of a rope tied with its top from a point on the ground at a distance of 12m from its foot. |

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| ANSWERS | | | |
| Q1. | 55° | Q2. | 48 ° |
| Q4. | $\angle 4 = 125^\circ \angle 1 = 55^\circ$ | Q5. | 75° |
| Q7. | AE -Median AD- Altitude | Q8. | Yes |
| Q10. | 34 cm | Q11. | 55°, 60°, 65° |
| Q13. | 20° | Q14. | 125° |
| | | Q15. | 15 m |