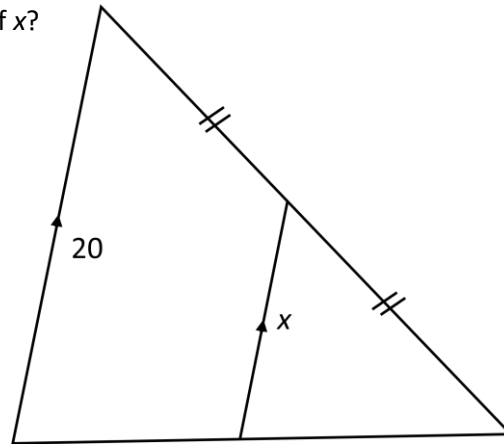


EUCLIDEAN GEOMETRY 6: QUIZ SOLUTIONS

Question 1

In the diagram, what is the value of x ?



- A. 8 B. 10 C. 12 D. 15

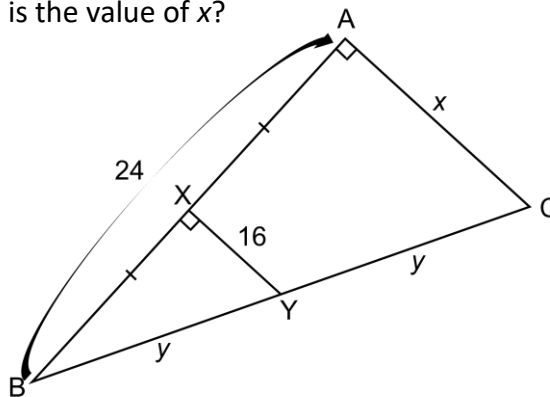
Solution

The mid-point and parallel lines indicate that this is the mid-point theorem.
This means that $x = 10$.

So, the correct answer is B.

Question 2

In the diagram, what is the value of x ?



- A. 8 B. 16 C. 24 D. 32

Solution

From the diagram $BX = 12$

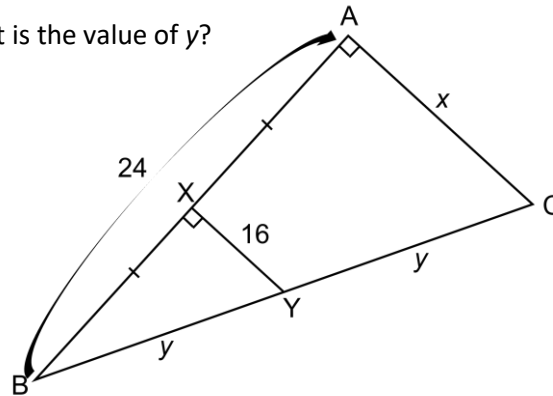
$$\therefore \frac{x}{16} = \frac{24}{12}$$

$$\therefore x = \frac{24}{12} \times 16 = 32$$

So, the correct answer is D.

Question 3

In the diagram, what is the value of y ?



- A. 12 B. 15 C. 20 D. 25

Solution

Either: use Pythagoras' theorem in triangle BXY and calculate BY

Or: recognise/know that triangle BXY is a 3, 4, 5 triangle with

$$BX = 12 = 3 \times 4$$

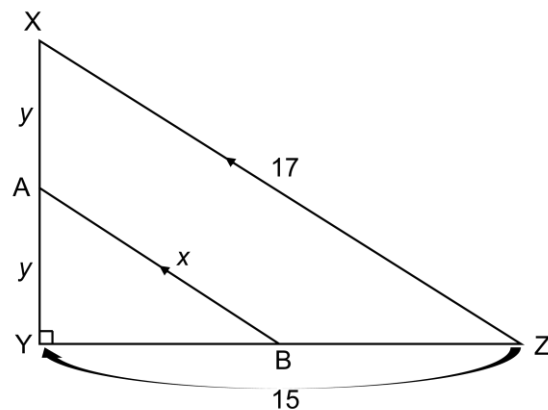
$$XY = 16 = 4 \times 4$$

$$\text{and so } BY = 5 \times 4 = 20$$

So, the correct answer is C.

Question 4

In the diagram, what is the value of x ?



- A. 8,0 B. 8,5 C. 9,0 D. 9,5

Solution

$AB \perp XZ$ and A is the mid-point of XY.

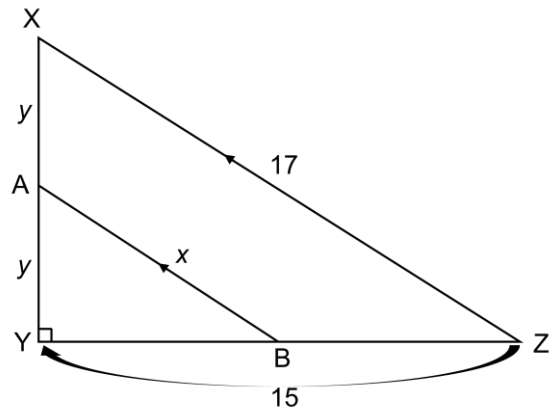
This means that $2AB = XZ$

$$\text{i.e., } x = 8,5$$

So, the correct answer is B.

Question 5

In the diagram, what is the value of y ?



A. 4

B. 6

C. 8

D. 10

Solution

Either: use Pythagoras' theorem in triangle XYZ and calculate XY

Or: recognise/know that triangle XYZ is an 8, 15, 17 triangle.

Either way, $2y = 8$

i.e. $y = 4$

So, the correct answer is A.