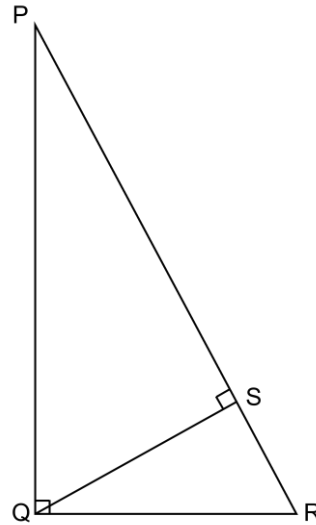


EUCLIDEAN GEOMETRY 7: QUIZ SOLUTIONS

Question 1

In the diagram, $\angle QPS = \angle SQR$.



A. True

B. False

Solution

In $\triangle QPS$, let $\angle QPS = x$

$\angle QPS = \angle QPR$

$\therefore \angle PRQ = 90^\circ - x$

But $\angle PRQ = \angle SRQ$

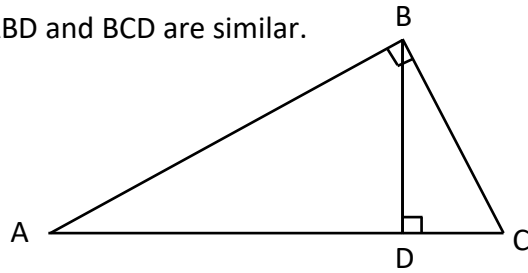
Thus, $\angle SQR = x$

$\therefore \angle QPS = \angle SQR$

So, the correct answer is A.

Question 2

In the diagram, triangles ABD and BCD are similar.



- A. True B. False

Solution

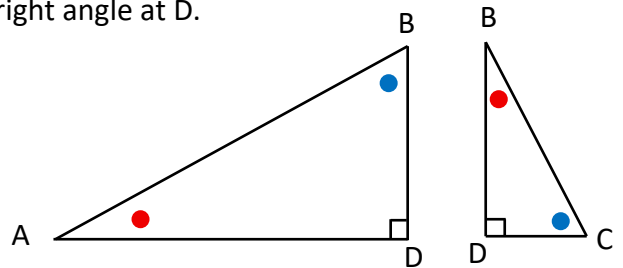
Each triangle, ABD and BCD, has a right angle at D.

$$\angle A \text{ in } \triangle ABD = \angle B \text{ in } \triangle BCD$$

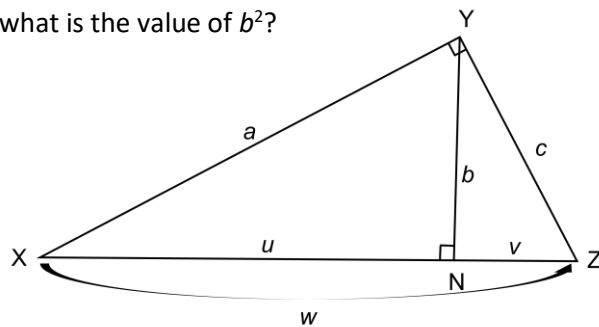
$$\angle B \text{ in } \triangle ABD = \angle C \text{ in } \triangle BCD$$

$\therefore \triangle ABD$ and $\triangle BCD$ are similar.

So, the correct answer is A.

**Question 3**

From the diagram, what is the value of b^2 ?



- A. cv B. uv C. uw D. au

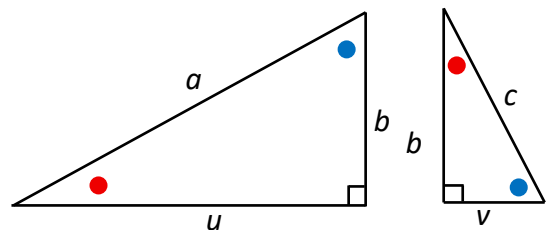
Solution

Using ratios of corresponding sides:

$$\frac{b}{v} = \frac{u}{b}$$

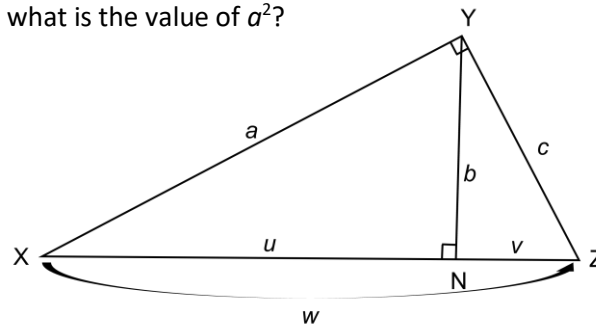
$$b^2 = uv$$

So, the correct answer is B.



Question 4

From the diagram, what is the value of a^2 ?



A. cv

B. uv

C. uw

D. bu

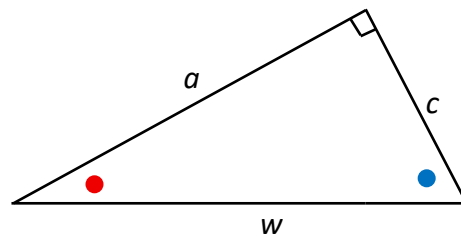
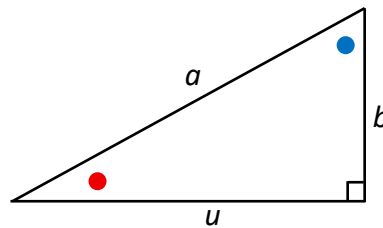
Solution

Using ratios of corresponding sides:

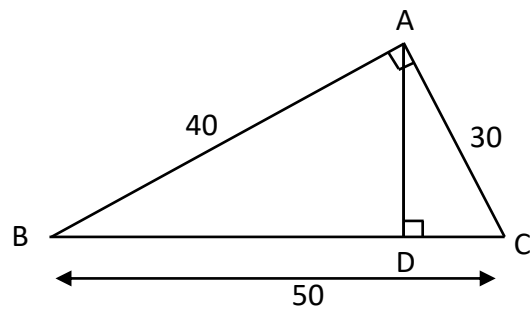
$$\frac{a}{u} = \frac{w}{a}$$

$$a^2 = uw$$

So, the correct answer is C.

**Question 5**

In the diagram, what is the length of AD?



A. 18

B. 20

C. 22

D. 24

Solution

Using ratios of corresponding sides:

$$\frac{AD}{30} = \frac{40}{50} \quad \text{OR} \quad \frac{AD}{40} = \frac{30}{50}$$

$$\therefore AD = 24$$

So, the correct answer is D.