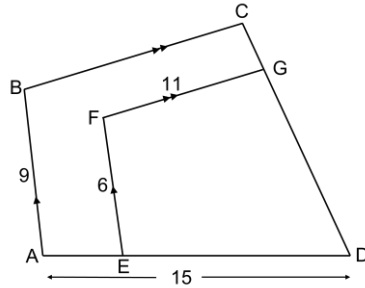


EUCLIDEAN GEOMETRY 1: QUIZ SOLUTIONS

Question 1

Name a quadrilateral that is similar to quadrilateral EFGD?



- A. ABCD B. BCDA C. CDAB D. DABC

Solution

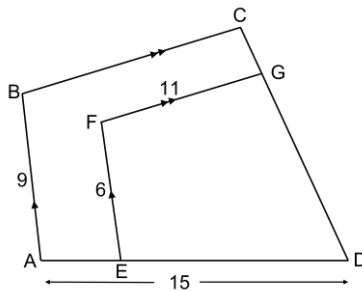
Similar figures should be labelled using corresponding vertices and sides.

Quad EFGD is similar to Quad ABCD.

So, the correct answer is A.

Question 2

What is the length of BC?



- A. $\frac{2}{33}$ B. $\frac{3}{22}$ C. $7\frac{1}{3}$ D. $16\frac{1}{2}$

Solution

Quad ABCD is similar to Quad EFGD

$$\therefore \frac{BC}{FG} = \frac{AB}{EF}$$

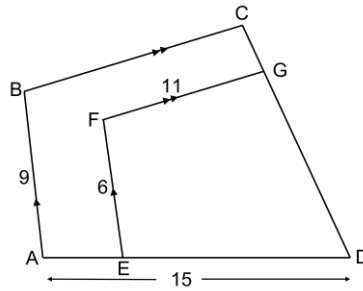
$$\text{i.e., } \frac{BC}{11} = \frac{9}{6}$$

$$\therefore BC = \frac{9}{6} \times 11 = \frac{33}{2}$$

So, the correct answer is D.

Question 3

What is the length of ED?



- A. $\frac{2}{45}$ B. $\frac{1}{10}$ C. 10 D. $16\frac{1}{2}$

Solution

Quad ABCD is similar to Quad EFGD

$$\therefore \frac{ED}{AD} = \frac{EF}{AB}$$

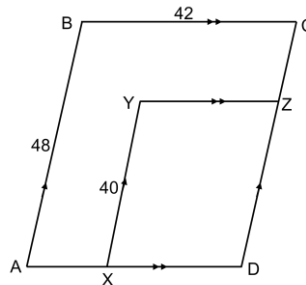
$$\text{i.e., } \frac{ED}{15} = \frac{6}{9}$$

$$\therefore ED = \frac{6}{9} \times 15 = 10$$

So, the correct answer is C.

Question 4

What is the length of YZ?



- A. 30 B. 35 C. 40 D. 50

Solution

Parallelogram ABCD is similar to Parallelogram XYZD.

$$\therefore \frac{YZ}{BC} = \frac{XY}{AB}$$

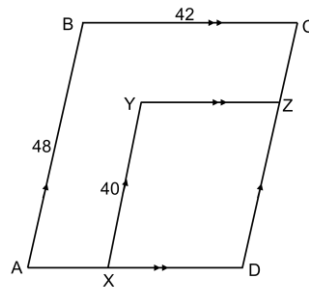
$$\text{i.e., } \frac{YZ}{42} = \frac{40}{48}$$

$$\therefore YZ = \frac{40}{48} \times 42 = 35$$

So the correct answer is B.

Question 5

What is the length of AX?



A. 5

B. 7

C. 12

D. 15

Solution

$$XD = YZ = 35$$

(opp sides of //gram XYZD)

$$AD = BC = 42$$

(opp sides of //gram ABCD)

$$AX = AD - XD = 42 - 35 = 7$$

So, the correct answer is B.