

Similar Polygons



Overview of problems



Example Set: A

Answer the true/false questions.

T/F Equilateral triangles are always similar?

T/F Two regular polygons are similar, therefore they have congruent sides?

T/F All regular pentagons are similar?

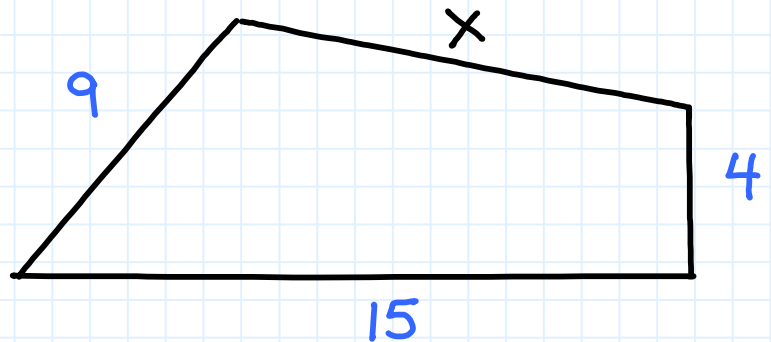
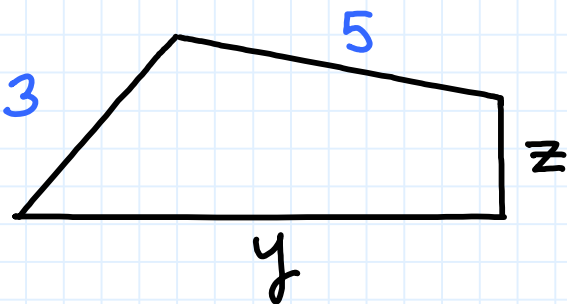
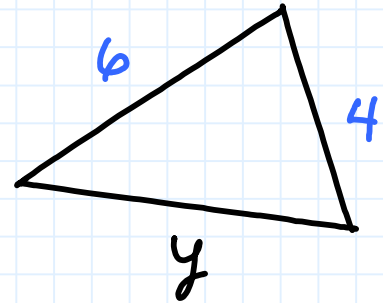
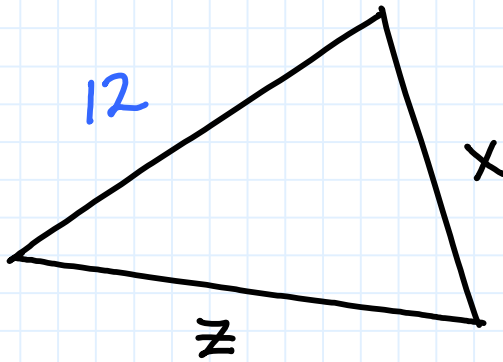
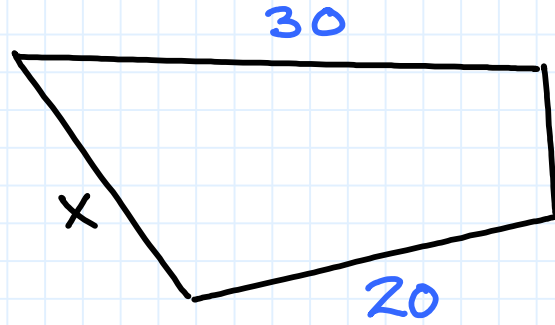
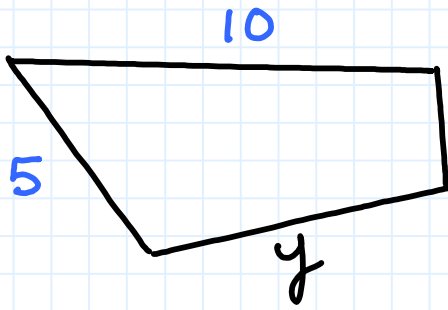
T/F All isosceles trapezoids are similar?

T/F An acute triangle and an obtuse triangle can never be similar?



Example Set: B

Each pair of polygons are similar. Find the values of the variables.



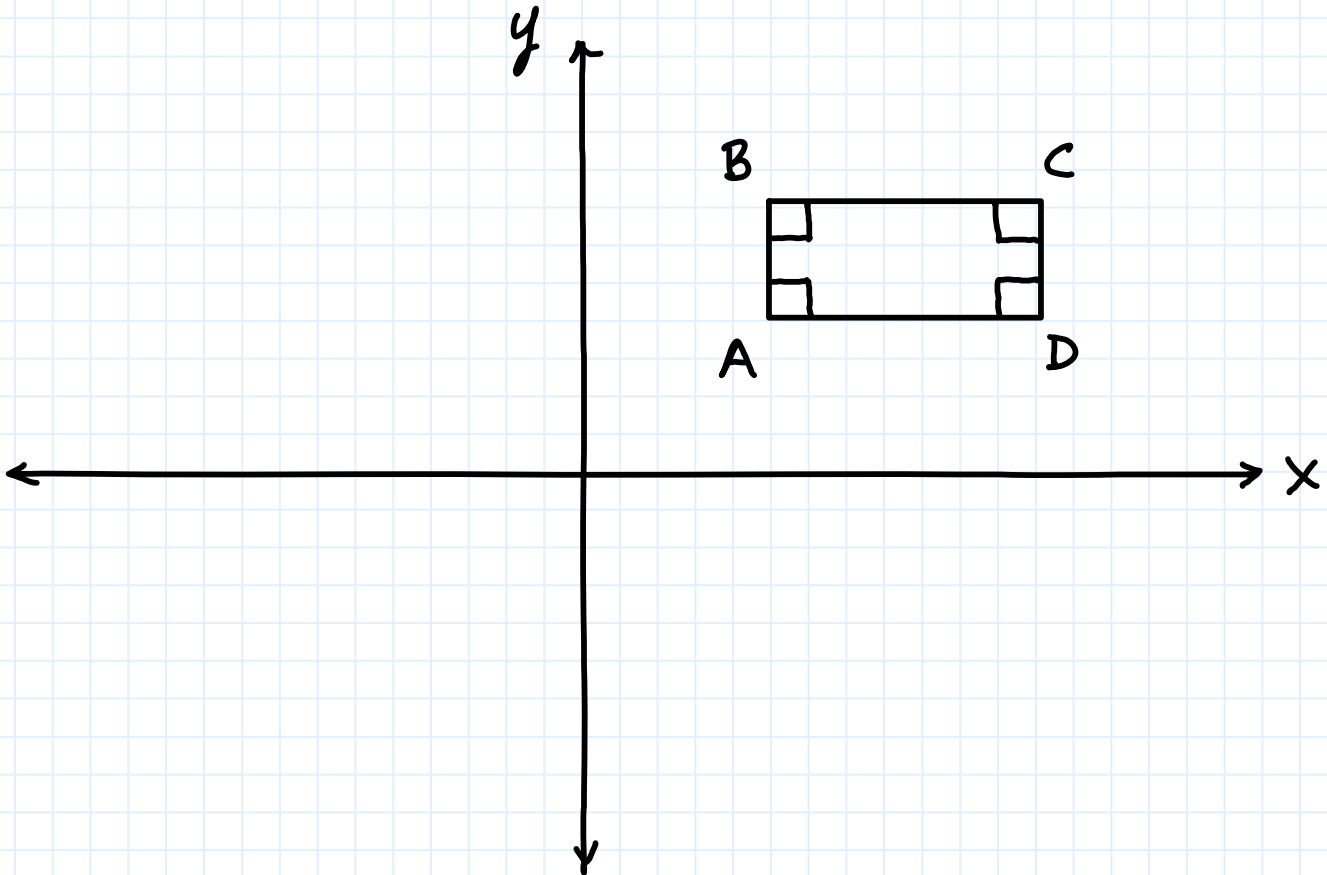


Example Set: C

Plot a rectangle $EFGH$ that is similar to the rectangle $ABCD$ on graphing paper- label the vertices of $EFGH$.

Use these guidelines in your plot:

1. $EFGH$ is twice as large as $ABCD$
2. Point E is located at $(-10, -10)$
3. The vertices of $ABCD$ are:
A $(5, 4)$, **B** $(5, 7)$, **C** $(12, 7)$, **D** $(12, 4)$



Similar Polygons



Overview of problems- KEY



Example Set: A

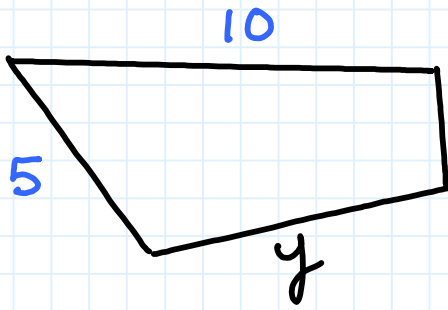
Answer the true/false questions.

- T/F Equilateral triangles are always similar?
- T/ F Two regular polygons are similar, therefore they have congruent sides?
- T/F All regular pentagons are similar?
- T/ F All isosceles trapezoids are similar?
- T/F An acute triangle and an obtuse triangle can never be similar?

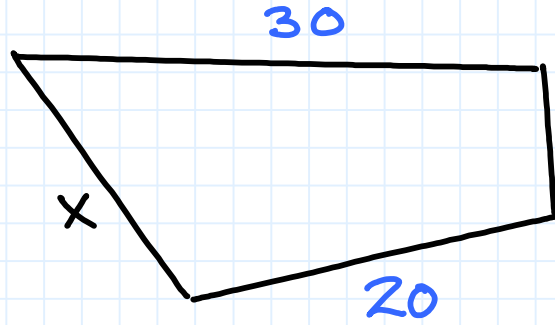


Example Set: B

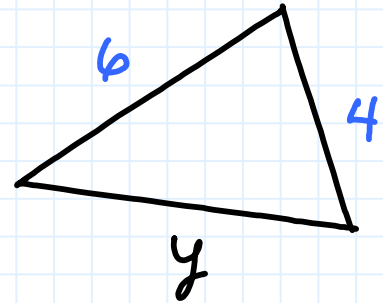
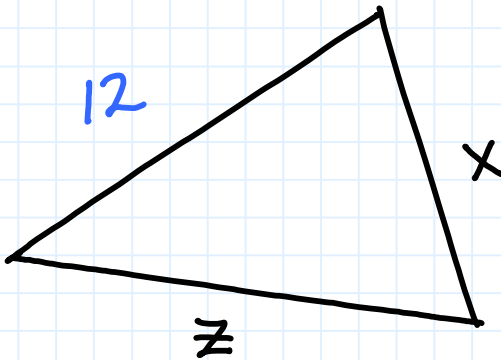
Each pair of polygons are similar. Find the values of the variables.



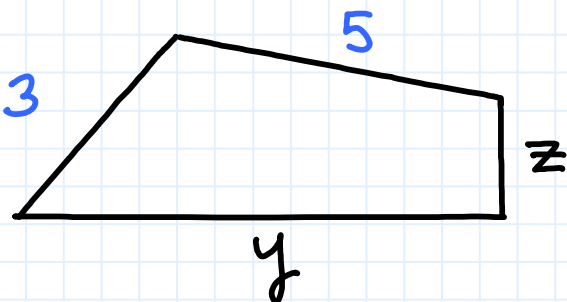
$$y = 6.6$$



$$x = 15$$

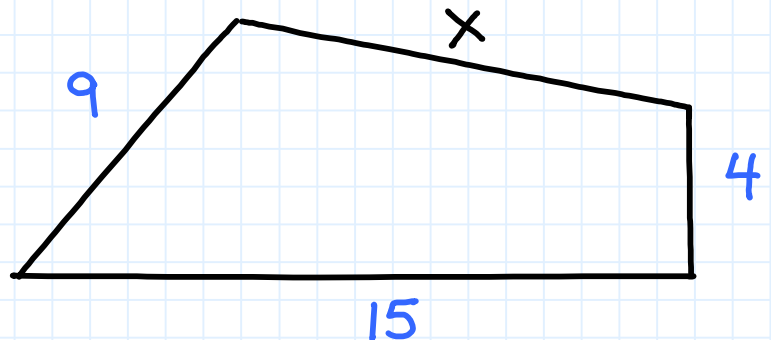


$x = 8$, not enough info to find y, z .



$$z = 1.3$$

$$x = 15$$



$$y = 5$$



Example Set: C

Plot a rectangle $EFGH$ that is similar to the rectangle $ABCD$ on graphing paper- label the vertices of $EFGH$.
Use these guidelines in your plot:

1. $EFGH$ is twice as large as $ABCD$
2. Point E is located at $(-10, -10)$
3. The vertices of $ABCD$ are:
A $(5, 4)$, **B** $(5, 7)$, **C** $(12, 7)$, **D** $(12, 4)$

