

Similarity QUIZZIZ Review KEY

Q.1 Find x

Avg. time taken

42 secs

36 correct, 0 incorrect

- a 10.5
- b 5
- c 8.5
- d 6

$$\frac{21 = 2x + 4}{-4} \quad \frac{17 = 2x}{2}$$

$$\frac{3}{x + 2} = \frac{2}{7}$$

Q.2 Find x

Avg. time taken

31 secs

35 correct, 1 incorrect

- a 21
- b 27/7
- c 13
- d 18

$$\frac{3x = 63}{3} \quad x = 21$$

$$\frac{3}{7} = \frac{9}{x}$$

Q.3 If the triangles are similar, find x

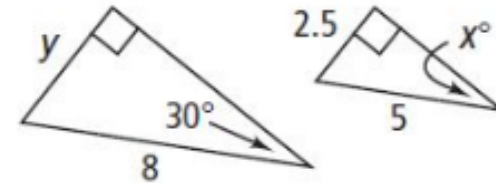
Avg. time taken

7 secs

27 correct, 10 incorrect

- a 90
- b 60
- c 30
- d 15

A's R  
 $\cong$



Q.4 If the triangles are similar, find y.

Avg. time taken

12 secs

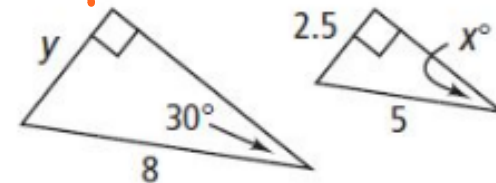
33 correct, 3 incorrect

- a 3
- b 3.5
- c 4
- d 4.5

Sides proportional

$$\frac{5}{8} = \frac{2.5}{y}$$

$$5y = 20 \quad y = 4$$



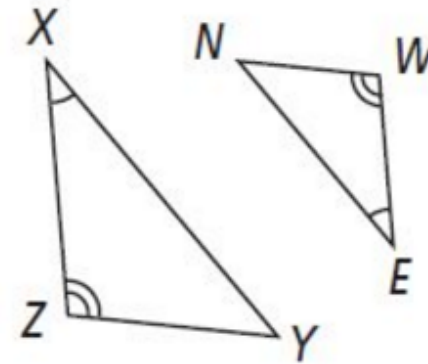
Similarity QUIZZIZ Review KEY

Q.5 Why are the triangles similar?

Avg. time taken  
4 secs

31 correct, 5 incorrect

- a AA-
- b SAS-
- c SSS-
- d AAS-

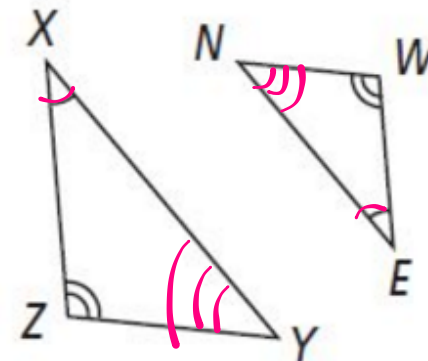


Q.6 What is the similarity statement for the triangle pair?

Avg. time taken  
24 secs

33 correct, 4 incorrect

- a  $\triangle XYZ \sim \triangle NEW$
  - b  $\triangle XZY \sim \triangle NWE$
  - c  $\triangle ZYX \sim \triangle ENW$
  - d  $\triangle YZX \sim \triangle NWE$
- $\triangle XYZ \sim \triangle ENW$



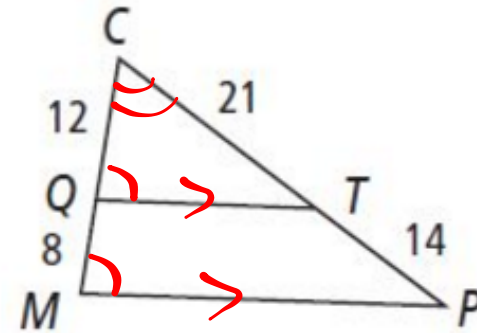
Similarity QUIZZIZ Review KEY

Q.7 Why are the triangles similar?

Avg. time taken  
16 secs

15 correct, 23 incorrect

- a AA-
- b ~~ASA-~~
- c SAS-
- d SSS-

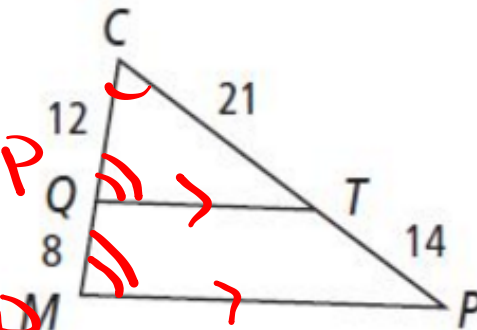
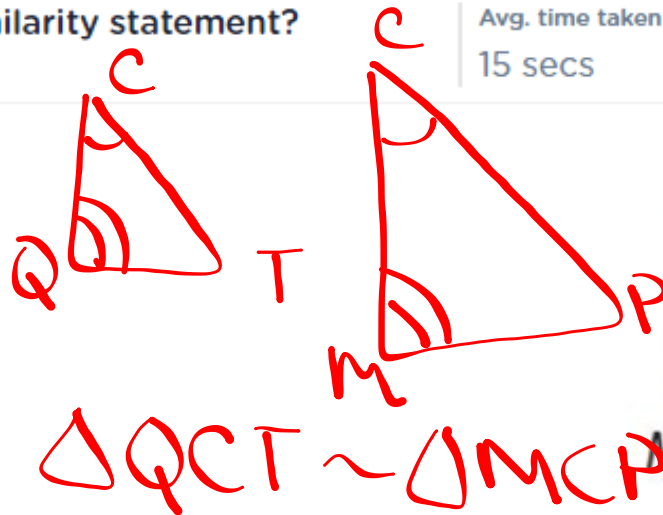


Q.8 What is a true similarity statement?

Avg. time taken  
15 secs

33 correct, 3 incorrect

- a  $\triangle QCT \sim \triangle MCP$
- b  $\triangle CQT \sim \triangle CPM$
- c  $\triangle TQC \sim \triangle CMP$
- d  $\triangle CTQ \sim \triangle MQC$

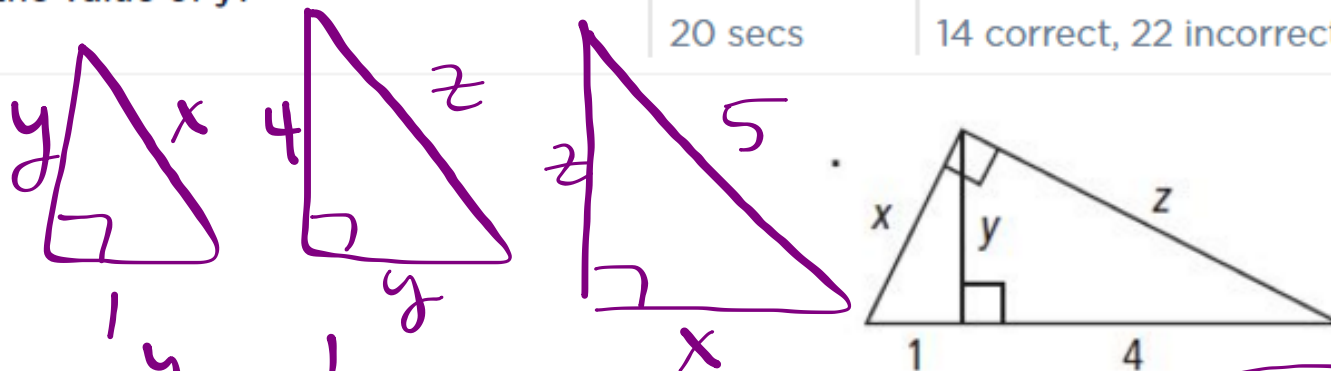


Q.9 What is the value of y?

Avg. time taken  
20 secs

14 correct, 22 incorrect

- a 2
- b  $\sqrt{3}$
- c 4
- d  $\sqrt{5}$



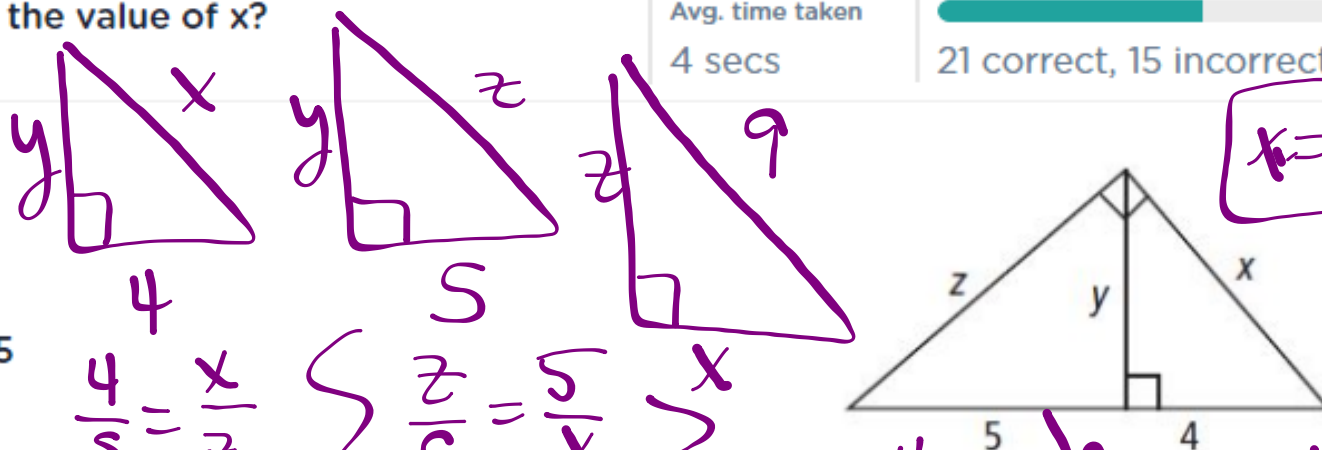
$$\frac{y}{4} = \frac{1}{y} \Rightarrow y^2 = 4 \Rightarrow y = \pm 2 \Rightarrow \boxed{y=2}$$

Q.10 What is the value of x?

Avg. time taken  
4 secs

21 correct, 15 incorrect

- a  $\sqrt{3}$
- b 3
- c  $\sqrt{20} = 2\sqrt{5}$
- d 6



$$\frac{4}{5} = \frac{x}{z} \quad \left\{ \begin{array}{l} \frac{z}{9} = \frac{5}{x} \\ z = \frac{45}{x} \end{array} \right. \quad \left\{ \begin{array}{l} x = \frac{4}{5} \left( \frac{45}{x} \right) \cdot 9 \\ x^2 = 36 \\ x = 6 \end{array} \right. \quad \boxed{x=6}$$

Similarity QUIZZIZ Review KEY

Q.11 Find the value of x.

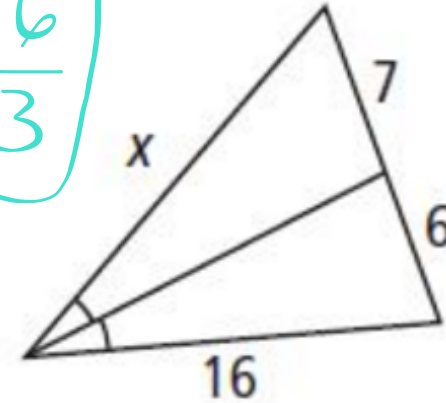
Avg. time taken  
23 secs

31 correct, 6 incorrect

- a 90/13
- b 56/3
- c 21/8
- d 96/7

$$\frac{x}{7} = \frac{16}{6}$$
$$6x = 112$$
$$x \approx 18.667$$

$x = \frac{56}{3}$



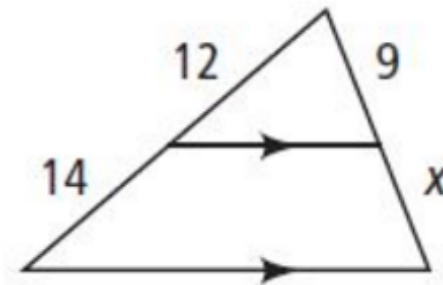
Q.12 Find x.

Avg. time taken  
25 secs

29 correct, 9 incorrect

- a 54/7
- b 56/3
- c 11
- d 21/2

$$\frac{12}{14} = \frac{9}{x}$$
$$12x = 126$$
$$x = 10.5$$



Q.13 To find the height of a very tall pine tree, you place a mirror on the ground and stand where you can see the top of the pine tree. How tall is the tree?

Avg. time taken

6 secs

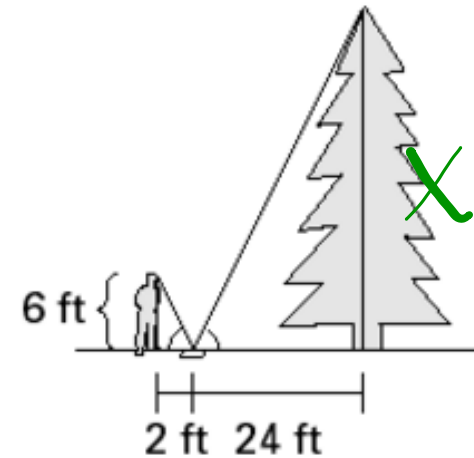
29 correct, 7 incorrect

- a 144 feet
- b 72 feet
- c 36 feet

$$\frac{2}{24} = \frac{6}{x}$$

$$2x = 144$$

$$x = 72$$



Similarity QUIZZIZ Review KEY

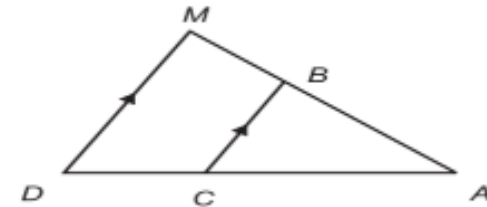
Q.14 Complete each proportion.  
 $AB / BM = ? / CD$

Avg. time taken  
15 secs

37 correct, 0 incorrect

- a BC
- b AC
- c MD
- d MC

$$\frac{AB}{BM} = \frac{x}{CD}$$



Q.15 Are these triangles similar?  
Angles in Triangle 1:  $40^\circ, 60^\circ$ , and  $80^\circ$   
Angles in Triangle 2:  $40^\circ, 50^\circ$ , and  $90^\circ$

Avg. time taken  
3 secs

29 correct, 6 incorrect

- a Yes
- b No
- c There is not enough information to decide.

Angles MUST be  $\approx$



Similarity QUIZZIZ Review KEY

Q.16 Are these triangles similar?

Known angles in Triangle 1:  $40^\circ, 60^\circ$

Known angles in Triangle 2:  $60^\circ, 40^\circ$

Avg. time taken

6 secs

32 correct, 6 incorrect

- a Yes
- b No
- c There is not enough information to decide.

$AA \sim$

Q.17 Determine whether the triangles are similar.

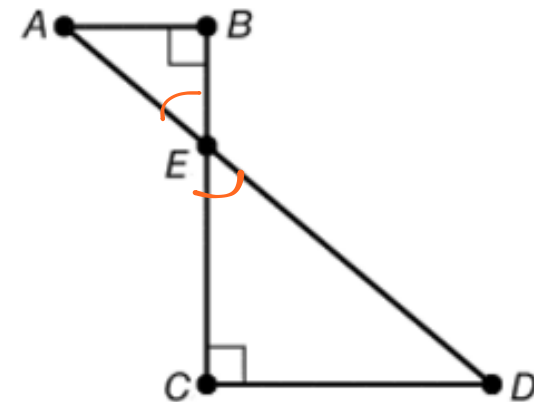
Avg. time taken

8 secs

25 correct, 13 incorrect

- a SSS  $\sim$
- b AA  $\sim$
- c SAS  $\sim$
- d not similar

yes vertical  
 $AA \sim$   $\Delta$ 's R  
 $\sim$   
 $\equiv$



Similarity QUIZZIZ Review KEY

Q.18 If two figures are similar their angles are congruent.

Avg. time taken

5 secs

23 correct, 14 incorrect

- a proportional
- b congruent
- c supplementary
- d complementary

Q.19 If two figures are similar, the corresponding sides are proportional.

Avg. time taken

4 secs

25 correct, 10 incorrect

- a equal
- b congruent
- c proportional
- d none of these

Similarity QUIZZIZ Review KEY

Q.20 Find AE .

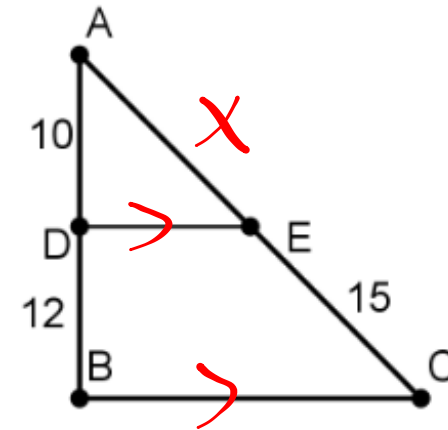
Avg. time taken

25 secs

32 correct, 3 incorrect

- a 12.5
- b 18
- c 11.75
- d 13

$$\frac{10}{12} = \frac{x}{15}$$
$$150 = 12x$$
$$125 = x$$



Q.21 What is the height of the Tree?

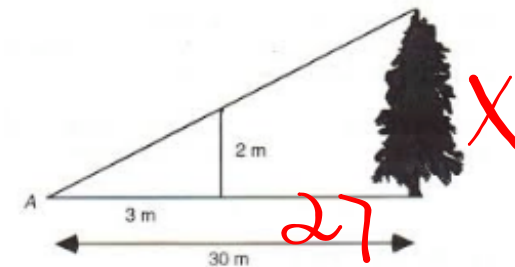
Avg. time taken

21 secs

28 correct, 9 incorrect

- a 20
- b 15
- c 30
- d 10

$$\frac{3}{30} = \frac{2}{x}$$
$$3x = 60$$
$$x = 20$$



Similarity QUIZZIZ Review KEY

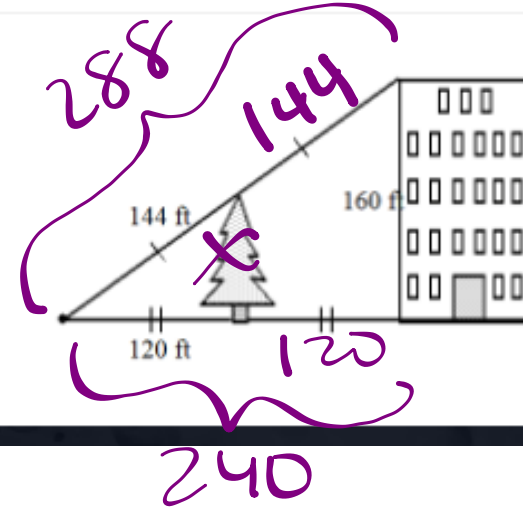
Q.22 Use the information in the diagram to determine the height of the tree.

Avg. time taken  
3 secs

33 correct, 2 incorrect

- a 80 feet
- b 320 feet
- c 40 feet
- d 160 feet

$$\frac{120}{x} = \frac{240}{160}$$
$$19,200 = 240x$$
$$80 = x$$



## Attachments

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7.4 triangle proportionality thm.gsp

7.4 triangle angle bisector.gsp

7.4 two transversal proportionality gsp.gsp