Similar Figures Wkst Solutions

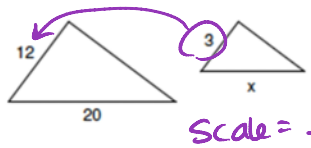
May-09-16
9:04 AM

Similar Figures & Trigonometric Ratios Worksheet

Name: Solutions

Each pair of figures is similar. Find the missing side.

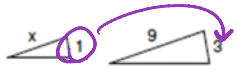
1)



Scale = $\frac{12}{3} = 4$

$x = \frac{20}{4}$ $\boxed{x = 5}$

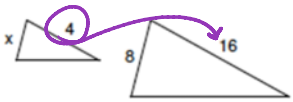
2)



Scale = $\frac{3}{1} = 3$

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

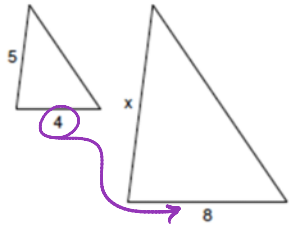
3)



Scale = $\frac{16}{4} = 4$

$x = \frac{8}{4}$ $\boxed{x = 2}$

4)

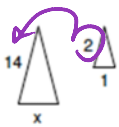


Scale = $\frac{8}{4} = 2$

$x = 5 \times 2$

$\boxed{x = 10}$

5)

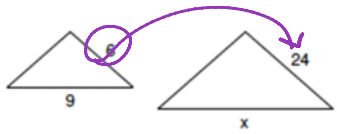


Scale = $\frac{14}{2} = 7$

$x = 1 \times 7$

$\boxed{x = 7}$

6)

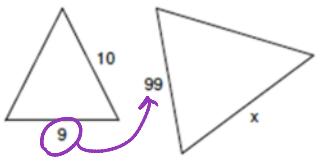


Scale = $\frac{24}{6} = 4$

$x = 9 \times 4$

$\boxed{x = 36}$

7)

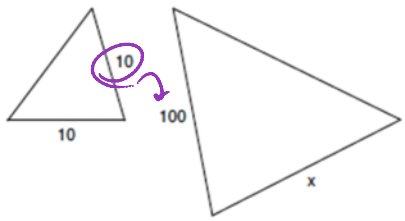


Scale = $\frac{99}{9} = 10$

$x = 10 \times 10$

$\boxed{x = 100}$

8)

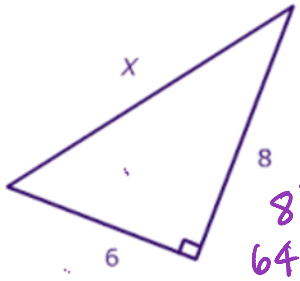


Scale = $\frac{100}{10} = 10$

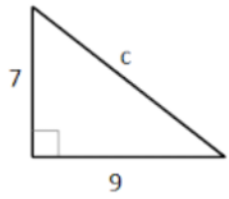
$x = 10 \times 10$

$\boxed{x = 100}$

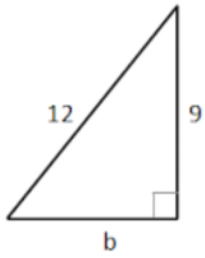
2) Solve for the unknown variable in each of the following triangles:



$8^2+6^2=x^2$
$64+36=x^2$
$100=x^2$
$x=10$

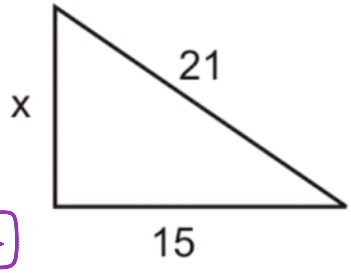


$7^2+9^2=c^2$
$49+81=c^2$
$130=c^2$
$c=\sqrt{130}$



$9^2+b^2=12^2$
$81+b^2=144$
$b^2=63$
$b=\sqrt{63}=3\sqrt{7}$

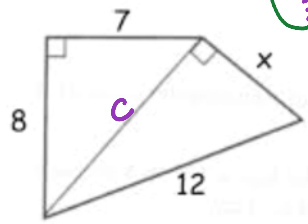
3 | 21
3 | 7



$x^2+15^2=21^2$
$x^2+225=441$
$x^2=216=6\sqrt{6}$

6 | 36
6 | 6

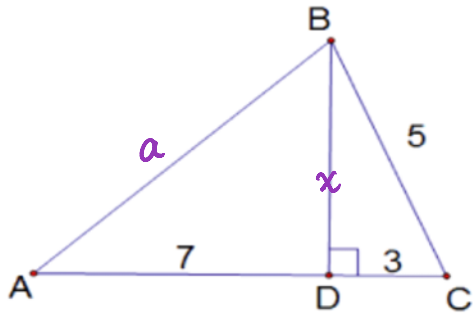
3) Find sidelength x



$7^2+8^2=c^2$
$49+64=c^2$
$113=c^2$
$c=\sqrt{113}$

$(\sqrt{113})^2+x^2=12^2$
$113+x^2=144$
$-113 \quad -113$
$x^2=31$
$x=\sqrt{31}$

4) Find sidelegnth AB



$3^2+x^2=5^2$
$9+x^2=25$
$-9 \quad -9$
$x^2=16$
$x=4$

$7^2+4^2=a^2$
$49+16=a^2$
$65=a^2$
$a=\sqrt{65}$

5 | 13