1. solve for x.

$\triangle JKL \sim \triangle GKH$

2. solve for x.

$\triangle ABC \sim \triangle XYZ$
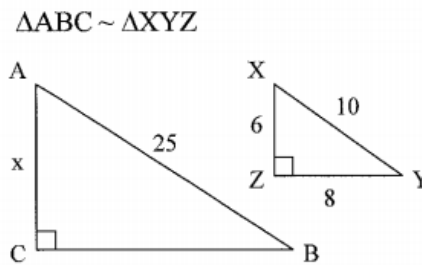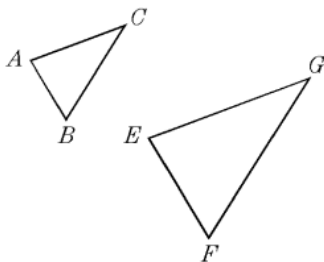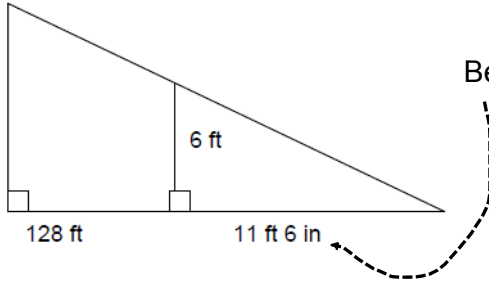

3. Given $\triangle BIG \sim \triangle SKY$. Solve for x and y if $BI = 4x + 4$, $IG = 40$, $BG = 5y + 3$, $SK = 2.5x + 6$, $KY = 30$, and $SY = 4y$.

4. A statue that is 12 ft tall casts a shadow that is 15 ft long. Find the length of the shadow that a 8 ft cardboard box casts.

5. In the diagram, $\triangle ABC \sim \triangle EFG$, $AB = 12$, $EF = 30$, $BC = x$, and $FG = 2x + 11$. What is the value of x?
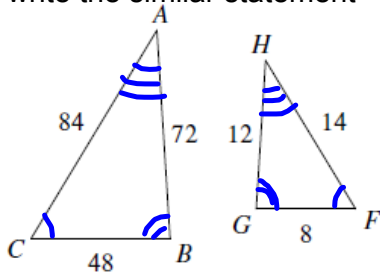
6.

A man 6 ft tall casts a shadow that is 11 ft. 6 in. long. The end of his shadow coincides with the end of the shadow cast by a building 128 ft. from the man. Find the height of the building.
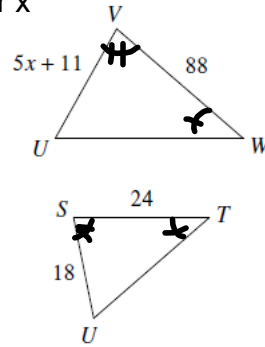
6 ft

128 ft   11 ft 6 in

Be careful here. Watch the units. this will be 11.5 ft

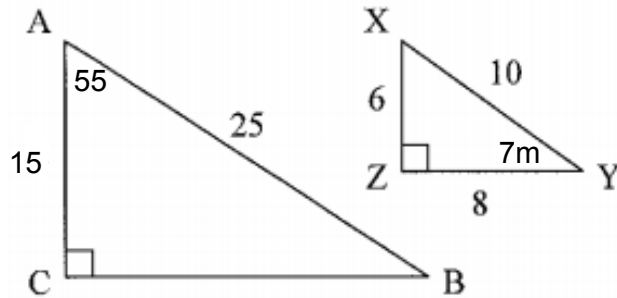**7.** Find the scale factor and write the similar statement
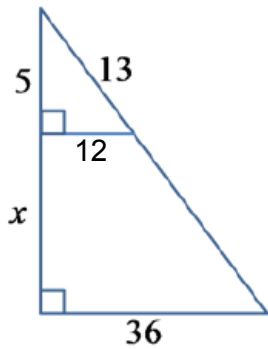
A
84
72
C   48   B

H
12   14
G   8   F

8. solve for x

V
$5x + 11$ 88
U   W

S   24   T
18
U

---

9. find x

5   13
12
x
36

10 $\triangle ABC \sim \triangle XYZ$ Find m.

A
55
15   25
C   B

X
6   10
Z   7m   Y
8

---

11 $\triangle TUV \sim \triangle TMN$

U
182
T   39
V   ?   M
42
N

1. solve for x.

ΔJKL ~ ΔGKH   x = 9

K

6

G   x   H

4

J   15   L

2. solve for x.

x = 15

ΔABC ~ ΔXYZ

A   X

            6   10

x   25

            Z   Y

            8

C   B

---
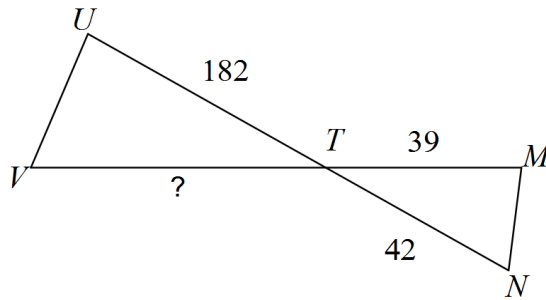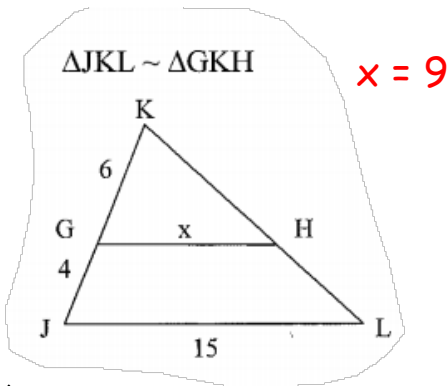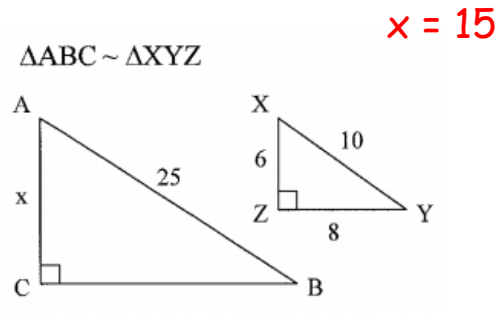
3. Given $\triangle BIG \sim \triangle SKY$. Solve for x and y if $BI = 4x + 4$, $IG = 40$, $BG = 5y + 3$, $SK = 2.5x + 6$, $KY = 30$, and $SY = 4y$.
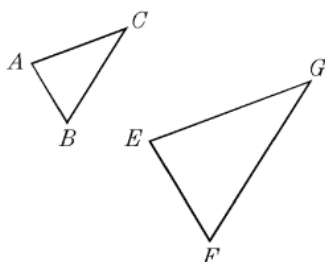
X = 6   y = 9

---

4. A statue that is 12 ft tall casts a shadow that is 15 ft long. Find the length of the shadow that a 8 ft cardboard box casts.
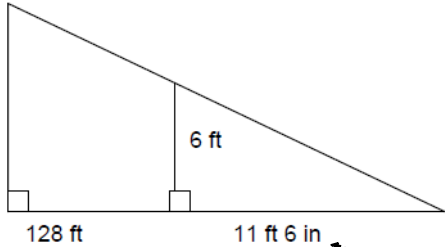
H = 10

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5. In the diagram, $\triangle ABC \sim \triangle EFG$, $AB = 12$, $EF = 30$, $BC = x$, and $FG = 2x + 11$. What is the value of x?

X = 22

C

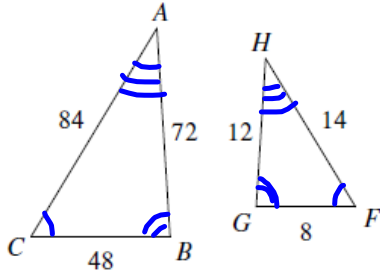A   G

B   E

            F

6.

A man 6 ft tall casts a shadow that is 11 ft. 6 in. long. The end of his shadow coincides with the end of the shadow cast by a building 128 ft. from the man. Find the height of the building.

6 ft

128 ft   11 ft 6 in

Be careful here. Watch the units. this will be 11.5 ft

$H = 72.78$

7. Find the scale factor and write the similar statement

$\dfrac{1}{6}$

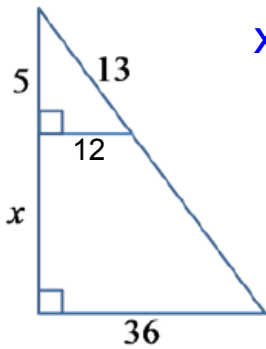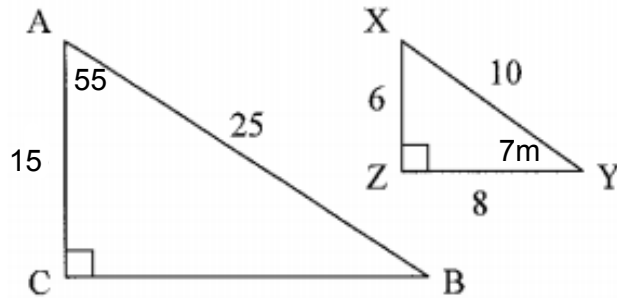A
84   72
H
12   14
C   48   B
G   8   F

8. solve for x

$x = 11$

V
$5x + 11$ 88
U   W

S   24   T
18
U

9. find x

$x = 10$

5   13
12
x
36

10    $\triangle ABC \sim \triangle XYZ$ Find m.

$m = 5$

A
55
25
15
C   B

X
10
6
Z   7m
8   Y

11    $\triangle TUV \sim \triangle TMN$

? = 196

U
182
V   ?   T   39   M
42
N