

Practice 5-5

Similar Figures and Proportions

Tell whether each pair of polygons is similar. Explain why or why not.

1.
 S.F. $\frac{1}{2}$
Yes

2.
No

3.
 S.F. $\frac{1}{3}$
Yes

4.
 S.F. $\frac{3}{2}$
Yes

5.
 S.F. $\frac{9}{4}$
Yes

6.
No

Exercise 7-14 show pairs of similar polygons. Find the unknown lengths.

7.
 $x = 100$ units
 $y = 20$ units

8.
 $x = 4 \frac{2}{3}$ units
 $y = 8$ units

9.
 $x = 18$ units
 $y = 24$ units

10.
 $x = 21$ units
 $y = 24$ units

11.
 $x = 20$ units
 $y = 9$ units

12.
 $x = 21.6$ units
 $y = 20$ units

13.
 $m = 24$ units
 $n = 8$ units

14.
 $x = 4$ units
 $y = 4 \frac{1}{2}$ units

Solve.

15. A rock show is being televised. The lead singer, who is 75 inches tall, is 15 inches tall on a TV monitor. The image of the bass player is 13 inches tall on the monitor. How tall is the bass player?

65 in of 5ft 5in

16. A 42-inch-long guitar is 10.5-feet-long on a stadium screen. A drum is 21 inches wide. How wide is the image on the stadium screen?

x = 63 in on