Practice 10-1

Mixed Exercises

If $\frac{x}{y} = \frac{5}{8}$, which of the following must be true?

1. $8x = 5y$
2. $5x = 8y$
3. $\frac{y}{x} = \frac{8}{5}$
4. $\frac{x}{5} = \frac{y}{8}$
5. $\frac{x}{8} = \frac{y}{5}$
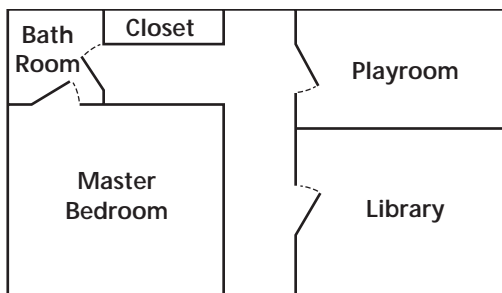6. $\frac{x + y}{y} = \frac{13}{8}$
7. $\frac{x}{y} = \frac{10}{16}$
8. $\frac{x}{2y} = \frac{5}{4}$
9. $\frac{x}{x - y} = \frac{5}{3}$
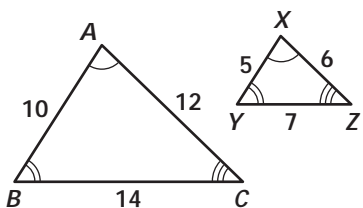
Find the actual dimensions of each room.

10. playroom

11. library

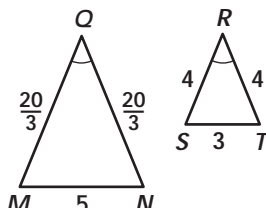12. master bedroom

13. bathroom

14. closet

Scale: 1 in. = 16 ft

Are the polygons similar? If they are, write a similarity statement and give the similarity ratio. If they are not, explain.
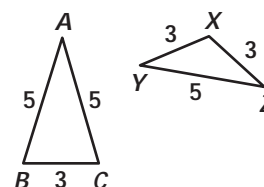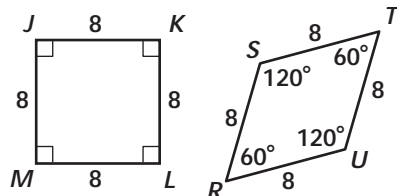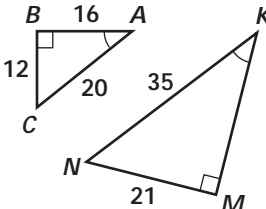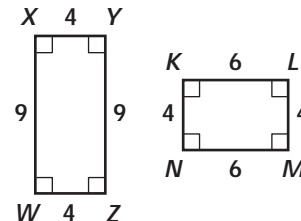
15.

16.

17.

18.

19.

20.

Solve for *x*.

21. $\frac{x}{4} = \frac{9}{3}$
22. $\frac{6}{x} = \frac{2}{11}$
23. $\frac{7}{5} = \frac{x}{3}$
24. $\frac{2}{x} = \frac{x}{32}$

25. $\frac{3}{11} = \frac{8}{x}$
26. $\frac{x}{x + 2} = \frac{3}{4}$
27. $\frac{x + 1}{x} = \frac{7}{5}$
28. $\frac{5}{x} = \frac{3}{x + 1}$