

Simplify.

5.  $\sqrt{50}$

6.  $3\sqrt{8}$

7.  $\sqrt{225}$

8.  $7\sqrt{63}$

9.  $\sqrt{288}$

10.  $\sqrt{\frac{3}{4}}$

11.  $\sqrt{\frac{1}{5}}$

12.  $\frac{\sqrt{5}}{\sqrt{2}}$

13.  $\sqrt{\frac{5}{2}}$

14.  $\frac{3}{4}\sqrt{\frac{28}{3}}$

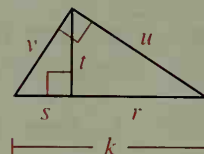
15. Give the geometric mean between:

a. 2 and 3

b. 2 and 6

c. 4 and 25

Study the diagram. Then complete each statement.

16. a.  $t$  is the geometric mean between  $\frac{?}{?}$  and  $\frac{?}{?}$ .b.  $u$  is the geometric mean between  $\frac{?}{?}$  and  $\frac{?}{?}$ .c.  $v$  is the geometric mean between  $\frac{?}{?}$  and  $\frac{?}{?}$ .17. a.  $z$  is the geometric mean between  $\frac{?}{?}$  and  $\frac{?}{?}$ .Thus  $z = \frac{?}{?}$ .b.  $x$  is the geometric mean between  $\frac{?}{?}$  and  $\frac{?}{?}$ .Thus  $x = \frac{?}{?}$ .c.  $y$  is the geometric mean between  $\frac{?}{?}$  and  $\frac{?}{?}$ .Thus  $y = \frac{?}{?}$ .

## Written Exercises

Simplify.

A 1.  $\sqrt{12}$

2.  $\sqrt{72}$

3.  $\sqrt{45}$

4.  $\sqrt{75}$

5.  $\sqrt{800}$

6.  $\sqrt{54}$

7.  $9\sqrt{40}$

8.  $4\sqrt{28}$

9.  $\sqrt{30} \cdot \sqrt{6}$

10.  $\sqrt{5} \cdot \sqrt{35}$

11.  $\sqrt{\frac{3}{7}}$

12.  $\sqrt{\frac{9}{5}}$

13.  $\frac{18}{\sqrt{3}}$

14.  $\frac{24}{3\sqrt{2}}$

15.  $\frac{\sqrt{15}}{3\sqrt{45}}$

Find the geometric mean between the two numbers.

16. 2 and 18

17. 3 and 27

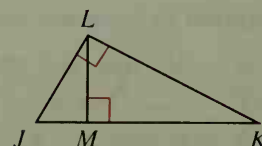
18. 49 and 25

19. 1 and 1000

20. 16 and 24

21. 22 and 55

Exercises 22–30 refer to the figure at the right.

22. If  $LM = 4$  and  $MK = 8$ , find  $JM$ .23. If  $LM = 6$  and  $JM = 4$ , find  $MK$ .24. If  $JM = 3$  and  $MK = 6$ , find  $LM$ .25. If  $JM = 4$  and  $JK = 9$ , find  $LK$ .26. If  $JM = 3$  and  $MK = 9$ , find  $LJ$ .B 27. If  $JM = 3$  and  $JL = 6$ , find  $MK$ .29. If  $LK = 3\sqrt{6}$  and  $MK = 6$ , find  $JM$ .28. If  $JL = 9$  and  $JM = 6$ , find  $MK$ .30. If  $LK = 7$  and  $MK = 6$ , find  $JM$ .