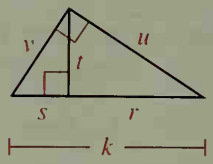
Simplify.

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

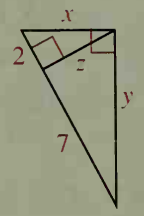
15. Give the geometric mean between:
   a. 2 and 3 **b.** 2 and 6 **c.** 4 and 25

Study the diagram. Then complete each statement.



16. **a.** t is the geometric mean between ___?___ and ___?___.
   b. u is the geometric mean between ___?___ and ___?___.
   c. v is the geometric mean between ___?___ and ___?___.

17. **a.** z is the geometric mean between ___?___ and ___?___.
   Thus $z =$ ___?___.
   b. x is the geometric mean between ___?___ and ___?___.
   Thus $x =$ ___?___.
   c. y is the geometric mean between ___?___ and ___?___.
   Thus $y =$ ___?___.



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

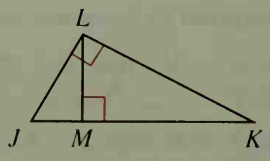
11. $\sqrt{\frac{3}{7}}$ 12. $\sqrt{\frac{9}{5}}$ 13. $\frac{18}{\sqrt{3}}$ 14. $\frac{24}{3\sqrt{2}}$ 15. $\frac{\sqrt{15}}{3\sqrt{45}}$

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.
28. If $JL = 9$ and $JM = 6$, find MK.
29. If $LK = 3\sqrt{6}$ and $MK = 6$, find JM.
30. If $LK = 7$ and $MK = 6$, find JM.