

Name _____ Class _____ Date _____

Practice 3-7

Percent of Change

Find each percent of change. Describe the percent of change as an increase or decrease. Round to the nearest whole number.

1. \$90 to \$84.50
2. \$100 to \$140
3. \$15 to \$5.50
4. 100 mi to 175 mi
5. 18 to 27
6. 290 yd to 261 yd
7. 26.2 to 22.8
8. \$8.50 to \$12.75

Find each percent of change. Describe the percent of change as an increase or decrease. Round to the nearest whole number.

9. In 1985, the average price for gasoline was \$1.20/gal. In 2000, the average price for gasoline was \$1.56. Find the percent of change.
10. In 1980, the average annual tuition charge for a four-year public university was \$840. The average annual tuition charge in 2000 was \$3356. What is the percent of change?
11. In 1977, the average number of households with cable television was 16.6%. In 2000, the average number of households with cable television was 68%. What is the percent of change?
12. In 1989, there were 38,000 licensed drivers under the age of 16. In 1999, the total number of licensed drivers under 16 was 33,248. Find the percent of change.

Practice 3-8

Finding and Estimating Square Roots

Tell whether each expression is *rational* or *irrational*.

13. $\sqrt{125}$
14. $-\sqrt{340}$
15. $\sqrt{1.96}$
16. $-\sqrt{0.09}$

Use a calculator to find each square root to the nearest hundredth.

17. $\sqrt{20}$

18. $\sqrt{73}$

19. $-\sqrt{38}$

20. $\sqrt{130}$

21. $\sqrt{149.3}$

22. $-\sqrt{8.7}$

23. $\sqrt{213.8}$

24. $-\sqrt{320.7}$

Simplify each expression.

25. $\sqrt{49}$

26. $-\sqrt{2.25}$

27. $\sqrt{\frac{1}{16}}$

28. $\sqrt{400}$

29. $\sqrt{0.25}$

30. $\pm\sqrt{\frac{9}{100}}$

31. $\sqrt{576}$

32. $\pm\sqrt{\frac{121}{36}}$

Between what two consecutive integers is each square root?

33. $\sqrt{40}$

34. $\sqrt{139}$

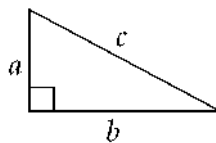
35. $-\sqrt{75}$

36. $\sqrt{93}$

37. $-\sqrt{105.6}$

38. $-\sqrt{173.5}$

Use the triangle at the right. Find the length of the missing side. If necessary, round to the nearest tenth.



39. $a = 12, b = 35, c = \blacksquare$

43. $a = 8, b = 15, c = \blacksquare$

40. $a = 10, b = \blacksquare, c = 26$

44. $a = \blacksquare, b = 24, c = 40$

41. $a = 11, b = \blacksquare, c = 61$

42. $a = 36, b = 15, c = \blacksquare$