

15. Solve: $0.4b + 2.2 = -3.6$

$b = -14.5$

16. Solve: $5x - 0.123 = 2x - 5.4$

$x = -1.759$

17. If fresh salmon sells for \$7.95 per pound, how much will 4.4 pounds cost?

~~\$~~34.98

18. Emma has \$3.35 in nickels and quarters. She has seven more nickels than quarters. How many of each coin does she have?

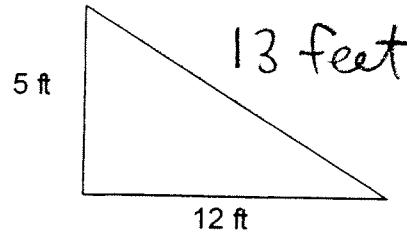
10 quarters

17 nickels

19. John has 14 cats. His monthly cat food bill is \$159.88. How much does it cost him to feed one cat for a month?

~~\$~~11.42

20. Find the length of the hypotenuse of the right triangle below.



Simplify problems 21 to 25 as much as possible.

21. $\sqrt{\frac{25}{36}} = \frac{5}{6}$

22. $\sqrt{120} \approx 10.95$

23. ~~$\sqrt{45x^2y^3}$~~

24. $5\sqrt{2} - 6\sqrt{2} \approx -1.41$

25. $5\sqrt{12} - 6\sqrt{27} \approx -13.86$

Name _____

Chapter 6 Test
Form A

Write each of the following ratios as a fraction in lowest terms.

1. 4 to 30 $\frac{2}{15}$

5. $1\frac{1}{3}$ to $3\frac{1}{3}$ $\frac{2}{5}$

2. 15 to 30 $\frac{1}{2}$

6. $4\frac{1}{2}$ to 5 $\frac{9}{10}$

3. $\frac{3}{4}$ to $\frac{4}{5}$ $\frac{15}{16}$

7. 0.5 to 1.5 $\frac{1}{3}$

4. $\frac{5}{7}$ to $\frac{9}{7}$ $\frac{5}{9}$

8. 0.04 to 0.24 $\frac{1}{6}$

Use the information below for problems 9 to 12.

John's pay stub shows his gross pay and the amounts of various deductions.

Gross Pay	2000
Federal Tax	350
State Tax	150
Medicare	40
FICA	150
Medical Insurance	100
Dental Insurance	10
Net Pay	1200

9. Find the ratio of John's net pay to his gross pay.

$$\frac{3}{5}$$

10. Find the ratio of total deductions to gross pay.

$$\frac{2}{5}$$

11. Find the ratio of total deductions to net pay.

$$\frac{2}{3}$$

12. Find the ratio of State and Federal taxes to gross pay.

$$\frac{1}{4}$$

13. A large SUV travels 180 miles on 12 gallons of gas. What is its gas mileage in miles per gallon?

$$15 \text{ mpg}$$

14. If 12.5 fluid ounces of frozen lemonade costs \$1.00, what is the cost in cents per fluid ounce?

$$8 \text{¢ per ounce}$$

15. If it takes a jet plane 2.4 hours to fly the 990 miles from Salt Lake City to Minneapolis/St. Paul, what is the rate of the plane in miles per hour?

$$412.5 \text{ mph}$$

16. At the local Alfred's Grocery, store dry roasted generic peanuts come in two sizes - - 12-oz size and 16-oz size. The 12-oz size sells for \$2.19 and the 16-oz size sells for \$2.99. Give the unit price for each size and indicate which size is the better buy.

Better Deal! → 12oz: 18.25¢ per ounce
16oz: 18.6875¢ per ounce

20. $\frac{x}{1.5} = \frac{6}{1.8}$

$x = 5$

Solve problems 17 to 20.

17. $\frac{4}{7} = \frac{20}{x}$

$x = 35$

18. $\frac{n}{24} = \frac{15}{72}$

$n = 5$

19. $\frac{\frac{1}{3}}{10} = \frac{y}{6}$

$y = \frac{1}{5}$ or 0.2

21. A man loses 7 lb in 4 months. At this rate, how many pounds will he lose in 18 months?

31.5 lbs

22. The student to faculty ratio at Salt Lake Community College is 20 to 1. If 30,000 students attend the college, how many faculty members are employed there?

1500 faculty members

23. If a 180-lb person needs a 40-mg dose of a certain drug, how many milligrams of the drug does a 270-lb person need to achieve the same blood serum concentration?

60mg

Name _____

Chapter 7 Test
Form A

1. Change 0.06 to a percent.
 6%
2. Change $\frac{7}{25}$ to a percent.
 28%
3. Change $3\frac{1}{4}\%$ to a fraction in lowest terms.
 $\frac{13}{400}$
4. Change 17.25% to a decimal.
 0.1725
5. What number is 22% of 20?
 4.4
6. What percent of 56 is 14?
 25%
7. 42 is 30% of what number.
 140
8. 32% of 98 is what number?
 31.36
9. How much fat is in a 700-gram candy bar that is 35% fat?
 245 grams
10. Of the students who enter Saline Community College, 8% graduate within two years. If 14,000 students started their studies in Fall 2004, how many will graduate within two years?
 $1,120 \text{ students}$

ChS