

Name: _____ Class: _____ Date: _____

1. Complete the following proportions (round to the nearest hundreth if (necessary):

(a) $\frac{n}{4} = \frac{9}{12}$ 1(a) _____

(b) $\frac{12}{18} = \frac{n}{9}$ 1(b) _____

(c) $\frac{4.38}{n} = \frac{7}{8}$ 1(c) _____

(d) $\frac{n}{30} = \frac{65}{120}$ 1(d) _____

(e) $\frac{1.9}{7} = \frac{13}{n}$ 1(e) _____

2. Solve the following application probelems:

(a) A new car gets 45 miles per gallon. How far can you travel on a 20 gallon tank? 2(a) _____

(b) A wooden fence requires 10 posts every 100 feet, How many posts will you need to complete a fence 750 feet long? 2(b) _____

(c) Captain Crunch cereal contains 120 calories per 3 oz. serving. How many calories are in an 8 oz. bowl of cereal? 2(c) _____

(d) An orchard requires 3 lbs of fertilizer for every 75 fruit tree's. How many pounds of fertilizer are required if the orchard contains 500 tree's? 2(d) _____

(e) A stock pays a dividend of \$0.50 per 20 shares. How much is your dividend if you own 450 shares? 2(e) _____

3. Write 35%

(a) as a fraction:

3(a) _____

(b) as a decimal:

3(b) _____

4. Write 70%

(a) as a fraction:

4(a) _____

(b) as a decimal:

4(b) _____

5. Write the following decimals as a percent.

(a) 0.55

5(a) _____

(b) 1.50

5(b) _____

6. Write the following fractions as a percent (round to the nearest hundredth of a percent).

(a) $\frac{3}{8}$

6(a) _____

(b) $1\frac{2}{3}$

6(b) _____

7. Answer the following questions. Round any answers to the nearest hundredth if required.

(a) What is 0.45% of 3000? 7(a) _____

(b) What percent of 80 is 25? 7(b) _____

(c) 15% of what is 12? 7(c) _____

(d) 44 is 220% of what? 7(d) _____

(e) What is 350% of 24? 7(e) _____

(f) 40 is 80% of what? 7(f) _____

(g) 125% of 8.8 is what? 7(g) _____

8. Answer the following questions, round any answers to the nearest hundredth if required.

(a) 20,000 microchips were inspected each day at Intel, if 4.8% of all microchips inspected failed to meet standards, how many microchips failed? 8(a) _____

(b) In a test of breaking strength for wooden baseball bats, 8 of the 250 bats tested did not meet strength requirements. What percent of the bats failed? 8(b) _____

(c) At the coffee shop, 25% of all coffee sales during January occur on Mondays. If last week the coffee shop sold 500 coffee's on monday, how many total coffee's were sold during the week? 8(c) _____

(d) The number of cows sold at the live stock fair in 2005 was 240, and in 2006 was 350. What was the percent increase in the number of cows sold? 8(d) _____

(e) The local grocery store uses a mark up of \$2.50 on a box of apples. If it costs the store \$12.50 per box, what is the markup rate at the grocery store? 8(e) _____

9. Answer the following questions, round any answers to the nearest hundredth if required.

(a) The sandwich shop uses a markup rate of 35%. What is the selling price of a large turkey sub that costs \$1.50 to make? 9(a) _____

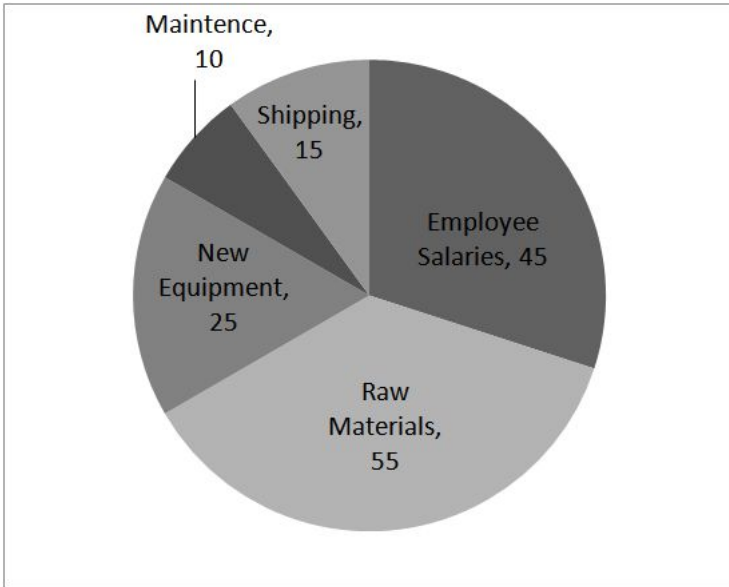
(b) A new turkey roaster allows the cooking time for a turkey to decrease from 120 minutes to 75 minutes. What is the percent decrease in cooking time? 9(b) _____

(c) The shoe store is having a sale on Zikies. Normally Zikies sell for \$175.00 a pair but are one sale for 35% off. What is the price of a pair of Zikies? 9(c) _____

(d) The price of premium coffee beans has gone from \$7.50 a pound to \$12.50 a pound in one year. What is the percent increase in the price of premium coffee? 9(d) _____

(e) A company used to offer a dividend of \$0.75 a share. After the stock market crash, the company is decreasing the dividend by 45%. What is the new dividend per share? 9(e) _____

10. The pie graph below shows the distribution of the money spent at a Manufacturing company. The number in each pie represents amount of money invested times \$1,000.



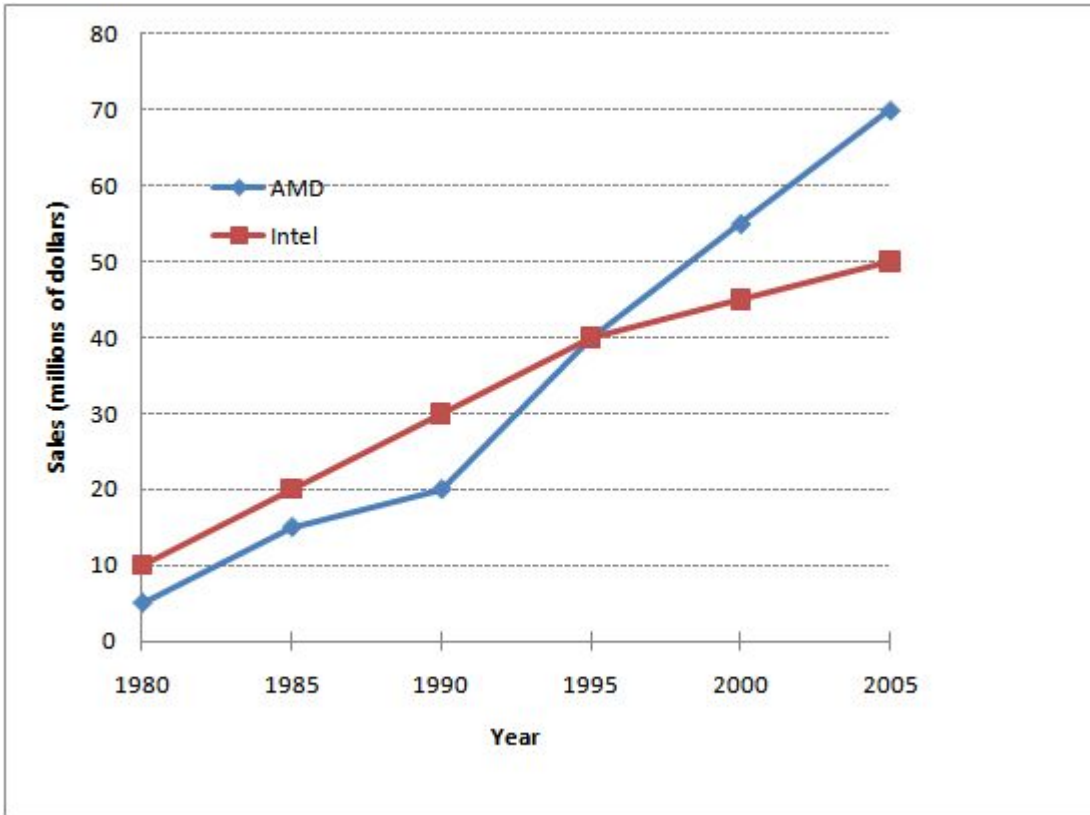
(a) What is the total amount of money the company spends? 10(a) _____

(b) What percent of the budget is spent on Employee Salaries? 10(b) _____

(c) What fraction of money is spent on New equipment? 10(c) _____

(d) What is the ratio of money spent on Maintenance to money spent on New Equipment? 10(d) _____

11. The double line graph shown below shows the sales numbers for AMD and Intel. Answer the following questions about the graph:



(a) In 1980 which company sold more computer chips? 11(a) _____

(b) In 1990 how much greater was the sales of Intel than AMD? 11(b) _____

(c) In which 5 year time period did the sales of AMD increase the least? 11(c) _____

(d) What is the percent increase in sales from 1985 to 2000 for Intel? 11(d) _____

(e) What is the total sales for Intel and AMD in the year 2000? 11(e) _____

12. Complete the following conversions, round to the nearest hundredth if (necessary):

(a) Convert 76 in. to ft. (Write answer as a proper fraction) 12(a) _____

(b) Convert $3\frac{2}{3}$ yd. to in. (Write answer as a proper fraction) 12(b) _____

(c) Convert 64 fl oz. to gal. (Write answer as a proper fraction) 12(c) _____

(d) Convert $3\frac{3}{4}$ gal. to qt. (Write answer as a proper fraction) 12(d) _____

(e) Convert 12 pt. to fl oz. (Write answer as a proper fraction) 12(e) _____

(f) Convert 2 days to seconds. (Write answer as a decimal) 12(f) _____

(g) Convert 0.5 tons to oz (Write answer as a decimal) 12(g) _____

(h) Convert 50 in. to _____ft. _____in. 12(h) _____

(i) Convert 15 pt. to _____qt. _____pt. 12(i) _____

(j) Convert 11,000 lb to _____tons _____lb. 12(j) _____

13. Addition: 13. _____
8 ft 10 in
+ 2 ft 8 in

14. Subtraction: 14. _____
6 lb 12 oz
- 2 lb 14 oz

15. $3\frac{3}{4}$ pt $\times 2$ (Write answer as a proper fraction) 15. _____

16. Division: 16. _____
 $2 \overline{\sqrt{7 \text{ ft } 8 \text{ in}}}$

17. Addition: 17. _____
3 lb 11 oz
+ 2 lb 9 oz

18. Multiplication: 18. _____
4 lb 3 oz
 $\times \quad 6$

19. Subtraction: (Write answer as a proper fraction) 19. _____

$$\begin{array}{r} 4\frac{2}{3} \text{ lb} \\ - 1\frac{5}{6} \text{ lb} \\ \hline \end{array}$$

20. Division: (Write answer as a proper fraction) 20. _____

$$15\frac{3}{4} \text{ in} \div 3$$

21. Complete the following conversions, round to the nearest hundredth if (necessary):
- (a) Convert 52 mm to cm. (Write answer as a decimal) 21(a) _____
 - (b) Convert 0.975 cm to m. (Write answer as a decimal) 21(b) _____
 - (c) Convert 150 cg to kg. (Write answer as a decimal) 21(c) _____
 - (d) Convert 200 hL to mL. (Write answer as a decimal) 21(d) _____
 - (e) Convert 15 km to mm. (Write answer as a decimal) 21(e) _____

22. Complete the following conversions, round to the nearest hundredth if (necessary):

(a) Convert 70.5 miles to km. (Write answer as a decimal) 22(a) _____

(b) Convert 20 miles to cm. (Write answer as a decimal) 22(b) _____

(c) Convert 14.3 L. to gal. (Write answer as a decimal) 22(c) _____

(d) Convert 12 kL to cups. (Write answer as a decimal) 22(d) _____

(e) Convert 3 tons to kg. (Write answer as a decimal) 22(e) _____

(f) Convert 2,400 minutes to days. (Write answer as a decimal) 22(f) _____

(g) Convert 25 mi/gal to km/L. (Write answer as a decimal) 22(g) _____

(h) Convert 12,000 gal/hr to kL/day. (Write answer as a decimal) 22(h) _____

(i) Convert 30 km/hr to mi/day. (Write answer as a decimal) 22(i) _____

(j) Convert 7.5 g/mL to lbs/gal. (Write answer as a decimal) 22(j) _____

23. Answer the following questions, round any answers to the nearest hundredth if required.

(a) A case of coke weighs 2.5 lbs. Coke is shipped in pallets containing 200 cases of coke. A semi-truck can haul 250 pallets of coke. How many pounds can the semi-truck carry? (Write answer as a decimal.) 23(a) _____

(b) A new drug requires that 2 pills be administered per day for each patient. The pills are sent in bottles containing 500 pills each. If the hospital has 200 patients on the drug, how many bottles of pills needs to be ordered to supply the hospital for 30 days? (Round up to the nearest bottle.) 23(b) _____

(c) A box of gum contains 24 packs of gum. Each pack of gum weighs 25 grams. How many kilograms does 100 boxes of gum weigh? (Write answer as a decimal.) 23(c) _____

(d) A new car in Europe gets 250 km/L, how many miles/gallon does the car get? 23(d) _____

(e) The daily recommended dose for calcium is 1000 mg per day. Milk contains 200 mg of calcium per Liter. How many glasses (a glass is defined as 8 fl. oz.) of milk would you have to drink to receive the daily recommended dose of calcium? 23(e) _____

24. Jay has invented 5-sided dice. Answer the following questions about the probability associated with rolling two of them.

(a) List all the probably outcomes of rolling two 5-sided dice.

(b) What is the probability of rolling a 7? 24(b) _____

(c) What is the probability of rolling a 5 or 6? 24(c) _____

(d) What is the probability of rolling a number less than or equal to 3? 24(d) _____

25. 7 red balls, 8 green balls, and 5 blue balls are placed in a box. If you reach in and pull out a ball, what is the probability that the ball is blue?

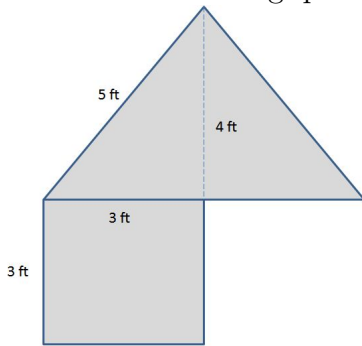
25. _____

26. Each of the letters in the word TENNESSEE are written on a card and placed into a hat. What is the probability of drawing the letter N from the hat?

26. _____

27. A bank is lending you \$15,000 dollars at an annual interest rate of 6.5%. The loan will last 60 months.
- (a) How much is the simple interest due on the loan? 27(a) _____
- (b) What is the maturity value (or future value) of the loan? 27(b) _____
- (c) What are the monthly payments on the loan? 27(c) _____
28. You have invested \$5,000 in a money market account that pays 4% interest compounded monthly. How much interest will you have earned on the investment after 5 years
28. _____
29. Jay is buying a new house for \$75,000 (I am a teacher, I live in a shack!). A down payment of 15% must be made to obtain a monthly mortgage rate of 10% for 5 years. A loan origination fee of 5.5 points is required.
- (a) What is the down payment amount? 29(a) _____
- (b) What is the amount of the mortgage Jay is taking out? 29(b) _____
- (c) What is the loan origination fee? 29(c) _____
- (d) What are the monthly mortgage payments on the house? 29(d) _____

30. Answer the following questions about the object below:



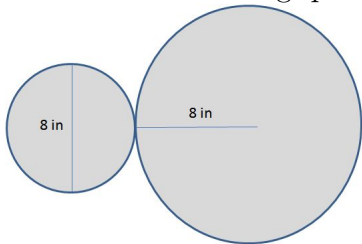
(a) Perimeter

30(a) _____

(b) Area

30(b) _____

31. Answer the following questions about the object below:



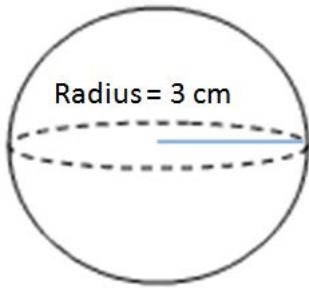
(a) Perimeter

31(a) _____

(b) Area

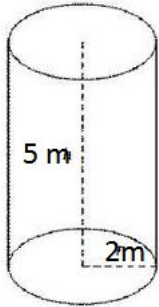
31(b) _____

32. What is the Volume of the following objects:



(a)

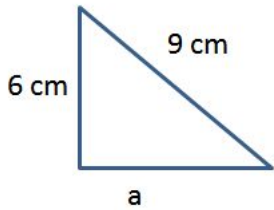
32(a) _____



(b)

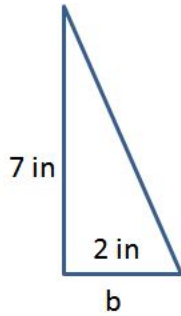
32(b) _____

33. Find the unknown side of the triangle in the following figures. Round to the nearest hundredths.



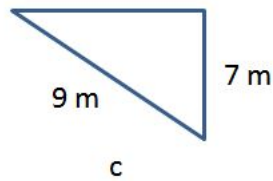
(a)

33(a) _____



(b)

33(b) _____



(c)

33(c) _____