Problem set - percents - 3

Name: _____ Date: _____

Solve each problem. Unless directed otherwise, round answers to the nearest hundredth, or to the nearest percent. Show all of your work. You may use a calculator and notes.

1. Write $\frac{19}{32}$ as a percent rounded to the nearest tenth of a percent.

2. Write $1\frac{1}{5}$ as a percent rounded to the nearest tenth of a percent.

3. Write 0.0035 as a percent.

4. Write 0.8% as a fraction in lowest terms.

5. Write 88.56% as a fraction in lowest terms.

6. On a particular job materials cost \$75 and labor costs \$96. To the nearest whole percent, what fraction of the total is labor?

7. Forty percent of a particular job is labor. If the job costs \$1,200 how much does the labor cost?

8. Pat gets a commission on sales of 0.5%. If Pat sells \$68,000 worth of parts, what is Pat's commission?

9. Carl gets a commission on sales of 2.5%. How much does Carl need to sell to get a commission of \$900?

10. A series of dimensions are to be within ±5%. What is the maximum and minimum acceptable dimension in each case?

    (a) 7.55 inches

    (b) 28.0 inches

    (c) 72.5 inches

    (d) 143 inches

11. A part is to be 1.2 inches in diameter, ±5%. It measures 1.27 inches. Is this acceptable?

12. Solvent, regularly $18.59 per gallon, is on sale for 20% off. What is the sale price?

13. Apex bought a machine for $180,000, borrowing $170,000 and paying the rest in cash. What percent of the purchase price did Apex pay in cash?

14. Out of a production run of three hundred thousand, 31 parts were rejected as too large, and 24 as too small. What percent of the run was rejected?

15. If 0.02% of parts may be out of spec, would 48 out-of-spec parts be acceptable in a production run of 220,000?

16. In January a bridge span is at its minimum length of 999.65 meters. In August, because of thermal expansion, it measures 1000.45 meters, its maximum length. Throughout that period, is the bridge span 1000m ±0.1% long?