

MAT 0012 Basic Algebra I

KEY CONCEPT REVIEW

SECTIONS 7.1, 7.3 – 7.4

TO RECEIVE CREDIT, DO ALL PROBLEMS, MAKE CORRECTIONS, AND SHOW ALL WORK.

1) **Write each decimal as a percent.**

- a) 0.64
- b) 0.375
- c) 5.2

During a recent election, 72 out of every 100 registered voters turned out to vote.

- 2) Find the ratio of registered voters who turned out to vote.
- 3) If a city has 25,000 registered voters, how many of these voters would you expect to vote?
- 4) What ratio of registered voters did not vote? Write this ratio as a decimal and a percent.
- 5) **Write each fraction or mixed number as a percent.**

- a) $\frac{7}{8}$
- b) $1\frac{4}{5}$

Write the fraction as percent using repeated decimal notation.

- 6) $\frac{5}{12}$

7) If you are rounding a decimal to the nearest tenth of a percent, to how many decimal places should you carry the division?

8) Write $\frac{7}{15}$ as a percent and round to the nearest tenth of a percent.

- A) 46.67%
- B) 4.67%
- C) 4.667%
- D) 46.7%

9) **Write each percent as a decimal.**

- a) 66%
- b) 170%
- c) 0.1%

10) **Write each percent as a fraction in lowest terms.**

- a) 18%
- b) 12.5%

11) **Complete the table below.**

Square Root	Fraction	Decimal	Percent
$\sqrt{\frac{16}{25}}$			
		0.75	
	$\frac{5}{2}$		

Translate to a proportion. Use "p" for the percent, "b" for the base, and "a" for the amount.

12) 8.5 is what percent of 38?

- A) $\frac{38}{b} = \frac{8.5}{100}$ B) $\frac{a}{38} = \frac{8.5}{100}$
 C) $\frac{8.5}{38} = \frac{p}{100}$ D) $\frac{38}{8.5} = \frac{p}{100}$

13) 22% of what number is 78.0?

- A) $\frac{a}{22} = \frac{78.0}{100}$ B) $\frac{a}{78.0} = \frac{22}{100}$
 C) $\frac{22}{b} = \frac{78.0}{100}$ D) $\frac{78.0}{b} = \frac{22}{100}$

Use a proportion to solve each problem.

14) 20% of what number is 62?

15) 3.9 is what percent of 15.8?

- A) 0.25% B) 24.68%
 C) 4.05% D) 405.13%

16) What number is 80% of 276?

Solve.

17) A union contract calls for a 7% salary increase. Determine the amount of the increase and the new salary for a worker who is currently making \$37,330.

Solve each problem.

18) Kay bought a share of stock for \$17.70. She was paid a dividend of \$3.54. What percent of the stock price is the dividend?

- A) 20% B) 5%
 C) 80% D) 2%

19) The enrollment at a local school increased by 7% over last year's enrollment of 1500. Find the current enrollment.