

NAME ANS KEY DATE \_\_\_\_\_

UNIT 10 REVIEW SHEET (Percents/scale drawings/conversions)

Solve for N. If necessary, round to the nearest tenth when necessary.

$$1) \frac{180}{200} = \frac{N\% \cdot 200}{200}$$

$$N\% = .9$$

$$N = 90\%$$

$$2) N = 30\% \cdot 150$$

$$N = .3(150)$$

$$N = 45$$

$$3) 15 = 75\% \cdot N$$

$$\frac{15}{.75} = \frac{.75N}{.75}$$

$$N = 20$$

$$4) N\% = \frac{15}{24}$$

$$N\% = .625$$

$$N = 62.5\%$$

5) Write each as a simplified ratio:

a) 38%

$$\frac{38}{100} = \frac{19}{50}$$

b) 104%

$$\frac{104}{100} = 1 \frac{4}{100}$$

$$1 \frac{1}{25}$$

c) 3%

$$\frac{3}{100}$$

6) Write each as decimal:

a) 24.5%

$$.245$$

b) 255%

$$2.55$$

c) 0.05%

$$.0005$$

Solve each question and round all answers to the nearest whole number when necessary.

7) 45 is what percent of 80?

$$\frac{45}{80} = \frac{N\% \cdot 80}{80}$$

$$N\% = .5625$$

$$N \approx 56\%$$

8) 12% of what number is 8?

$$12\% \cdot N = 8$$

$$\frac{.12N}{.12} = \frac{8}{.12}$$

$$N = 66.\bar{6}$$

$$N \approx 67$$

9) What is 130% of 60?

$$N = 130\% \cdot 60$$

$$N = 1.3(60)$$

$$N = 78$$

Answer each percent word problem below using the percent equation.

10) John threw 20 footballs at a target and made 15% of the shots. How many did he make?

$$\text{Part} = \% \cdot \text{whole}$$

$$N = 15\% (20)$$

$$N = .15(20)$$

$$N = 3$$

John made  
3 shots

11) A 14-gram serving of mayonnaise contains 11 grams of fat. What percent of the mayonnaise, to the nearest tenth of a percent, is fat?

$$\text{Part} = \% \cdot \text{whole}$$

$$\frac{11}{14} = \frac{N\% \cdot 14}{14}$$

$$N\% \approx .7857$$

$$N \approx 78.6\%$$

Approx 78.6% of  
mayo is fat

12) While grocery shopping, you purchase boxes of cereal for \$12.76. The entire grocery bill came to a total of \$51.04. What percent of your bill did you spend on cereal?

$$\frac{12.76}{51.04} = N\% \cdot \frac{51.04}{51.04} \quad N = 25\%$$

$$N\% = .25$$

you spent 25% of the bill on cereal

13) Randi answered 63 questions correctly on a test made up of 90 questions.

a. What percent did she answer correctly?

$$\frac{63}{90} = N\% \cdot \frac{90}{90} \quad N\% = .7$$

$$N = 70\%$$

b. What percent did she answer incorrectly?

$$100\% - 70\%$$

30%

14) On your math test, you scored an 85%. You got 34 problems correct. How many problems were on the test?

$$34 = 85\% \cdot N$$

$$\frac{34}{.85} = \frac{.85N}{.85}$$

$$N = 40$$

40 questions on the test

15) 55% of the people on a survey said they prefer football over baseball. If 110 people prefer football, how many people were surveyed?

$$110 = 55\% \cdot N$$

$$\frac{110}{.55} = \frac{.55N}{.55} \quad N = 200$$

200 people were surveyed

16) Ninety percent of the ninth grade students at Schenectady High School take algebra. If 180 ninth grade students take algebra, how many ninth grade students do not take algebra?

90% take algebra

↓  
10% do not take algebra

$$10\% (200)$$

$$.10(200)$$

$$20$$

20 students do not take algebra

$$180 = 90\% \cdot N$$

$$\frac{180}{.90} = \frac{.90N}{.90}$$

$$N = 200$$

There are 200 students

17) a. Shanice got 6 questions wrong on a test that consisted of 80 questions. To the nearest percent, what percent of the questions did she solve correctly?

$$80 - 6 = 74$$

$$\frac{74}{80} = \frac{N\% \cdot 80}{80}$$

$$N\% = .925$$

$$N \approx 93\%$$

b. What percent did she answer incorrectly?

$$100\% - 93\%$$

$$7\%$$

18) A class is limited to 25 total students. Eighteen are already signed up. What percent of the class is not filled?

$$25 - 18 = 7$$

$$\frac{7}{25} = \frac{N\% \cdot 25}{25}$$

$$N\% = .28$$

$$N = 28\%$$

19) A person misses 5 questions on a 72 question test. What is the grade on the test?

$$72 - 5 = 67$$

$$\frac{67}{72} = \frac{N\% \cdot 72}{72}$$

$$N\% \approx .93$$

$$N = 93\%$$

20) An owner of a small store knows that in the last week 54 customers paid with cash, 63 paid with a debit card, and 153 paid with a credit card. What percentage of the customers paid with cash?

$$\frac{54}{270} = \frac{N\% \cdot 270}{270}$$

$$N\% = .2$$

$$N = 20\%$$

$$\begin{array}{r} 153 \\ 54 \\ + 63 \\ \hline 270 \\ \text{TOTAL} \\ \text{CUSTOMERS} \end{array}$$