

## Chapter 2 Test Study Guide

### ◆ Converting Fractions and Decimals (2-1)

Convert the decimals to fractions or mixed numbers in simplest form.

1) 12.2

$$12 \frac{2}{10} = 12 \frac{1}{5}$$

2) 0.85

$$\frac{85}{100} = \frac{17}{20}$$

3) 0.03

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

4) 1.064

$$1 \frac{64}{1000} = 1 \frac{8}{125}$$

Convert the fractions and mixed numbers into decimals.

5)  $\frac{55}{400}$

$$0.1375$$

6)  $3 \frac{11}{20}$

$$3.55$$

7)  $\frac{105}{500}$

$$0.21$$

8)  $9 \frac{7}{8}$

$$9.875$$

$$\begin{array}{r} 55 \div 4 = 13.75 \\ \hline 400 \div 4 = 100 \end{array}$$

OR

$$400 \overline{)55}$$

$$\frac{11 \times 5}{20 \times 5} = \frac{55}{100}$$

$$\frac{105 \div 5}{500 \div 5} = \frac{21}{100}$$

$$\begin{array}{r} .875 \\ 8 \overline{)7.000} \\ \underline{-64} \phantom{00} \\ 60 \phantom{0} \\ \underline{-56} \phantom{0} \\ 40 \\ \underline{-40} \\ 0 \end{array}$$

### ◆ Percents, Fractions, and Decimals (2-2, 2-3, 2-4, 2-5)

Write the following numbers as percents.

9) 0.203

$$20.3\%$$

10) 0.7

$$70\%$$

11)  $\frac{11}{25}$

$$44\%$$

$$\frac{11 \times 4}{25 \times 4} = \frac{44}{100}$$

12)  $\frac{21}{40}$

$$52.5\%$$

$$\begin{array}{r} .525 \\ 40 \overline{)21.000} \\ \underline{-200} \phantom{00} \\ 100 \phantom{0} \\ \underline{-80} \phantom{0} \\ 200 \\ \underline{-200} \\ 0 \end{array}$$

$$0.525$$

13) Complete the table. Write fractions and mixed numbers in simplest form.

Percent	Fraction	Decimal
52%	$\frac{52 \div 4}{100 \div 4} = \frac{13}{25}$	0.52
12.5%	$\frac{1}{8}$	0.125
136%	$1\frac{9}{25}$	1.36
0.8%	$\frac{8 \div 8}{1000 \div 8} = \frac{1}{125}$	0.008
60%	$\frac{3}{5}$	0.6

14) The table shows the wins of three local baseball teams. They all played the same number of games. List the teams in order of their winning statistics from least to greatest.

Team	Wins
Bears	86%
Tigers	$\frac{7}{8}$
Mustangs	0.84
Lions	$\frac{5}{6}$
Warriors	0.9

$$= 0.86$$

$$= 0.875$$

$$= 0.8\bar{3}$$

$$8 \overline{) 7.0} \begin{array}{r} .875 \\ \underline{8} \phantom{0} \\ 0 \phantom{0} \\ \underline{0} \phantom{0} \\ 0 \phantom{0} \end{array}$$

$$6 \overline{) 5.0} \begin{array}{r} .8333... \\ \underline{6} \phantom{0} \\ 0 \phantom{0} \\ \underline{0} \phantom{0} \\ 0 \phantom{0} \end{array}$$

- ③ 0.860
- ④ 0.875
- ② 0.840
- ① 0.833
- ⑤ 0.900

Lions, Mustangs, Bears,  
Tigers, Warriors

◆ Solve Percent Problems (2-7 & 2-8)

15) What is 99% of 200?

$$0.99 \times 200 = 198$$

99		198
100		200

or  $\times 2$

16) 12% of what number is 9?

12	3	9
100	25	75

$\div 4$   $\times 3$   $\div 4$   $\times 3$

17) What is 0.6% of 100?

$$0.006 \times 100 = 0.6$$

0.6		0.6
100		100

$\times 1$

18) 16 is 40% of what number?

40	4	16
100	10	40

$\div 10$   $\times 4$   $\div 10$   $\times 4$

19) 20% of what number is 75?

20	5	75
100	25	375

$\div 4$   $\times 15$   $\div 4$   $\times 15$

20) What is 145% of 160?

$= 232$

$$\begin{array}{r} 21.45 \\ \times 160 \\ \hline 1000 \\ 8700 \\ 14500 \\ \hline 23200 \end{array}$$

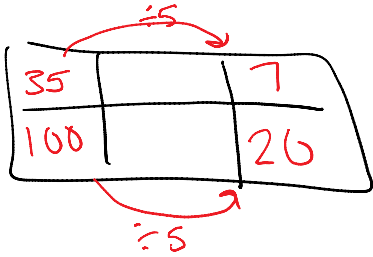
145	29	232
100	20	60

$\div 5$   $\times 8$   $\div 5$   $\times 8$

21) Nine students in Maddie's classroom are wearing red. There are 30 students in her class. Maddie says that 30% of her class is wearing red. Is Maddie correct? Explain your reasoning.

$$30\% \text{ of } 30 = 0.3 \times 30 = 9 \quad \text{Yes!}$$

22) Jim has answered seven E-mails. This is 35% of the E-mails he must answer. How many E-mails does he need to answer?



20 emails

23) Evan has \$8. He wants to buy a book for \$7.50. The sales tax is 6%. Does he have enough money? Explain your reasoning.

$$6\% \text{ of } 7.50$$

$$0.06 \times 7.50 = 0.45$$

$$7.50 + 0.45 = \$7.95$$

$$7.95 < 8 \quad \text{Yes!}$$

24) The original price of a pair of headphones is \$68. If they are on sale this week for 15% off, what is the sale price of the headphones?

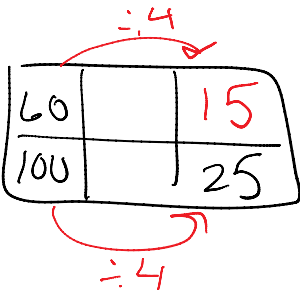
$$15\% \text{ of } 68 = 0.15 \times 68 = \$10.20$$

$$\begin{array}{r} 68 \\ \times 15 \\ \hline 340 \\ 680 \\ \hline 1020 \end{array}$$

$$\begin{array}{r} 68.80 \\ - 10.20 \\ \hline 57.80 \end{array}$$

\$57.80

25) In a load of laundry, 60% of the socks are white. If there are 25 socks in the load, how many socks are **not** white?



15 white socks

$$25 - 15 = 10 \text{ non-white socks}$$