Chapter 5 Test Review
Percents
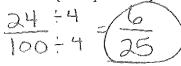
SCORE _____

1. What is 5.3% written as a decimal?

.05.3 $\boxed{.053}$

2. What is 24% written as a fraction (in simplest form)?

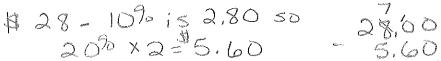$\frac{24 \div 4}{100 \div 4} = \boxed{\frac{6}{25}}$

3. A restaurant surveyed 280 people about their favorite side dish. If 40% of the people chose macaroni and cheese, how many people chose macaroni and cheese?
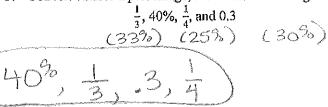
$40\% = .4 \times 280$

OR

*can us 10% benchmark = 28 × 4 = $\boxed{112 \text{ people}}$

4. The original price of a DVD is $28. The sale price is 20% off the original price. What is the sale price for the DVD?
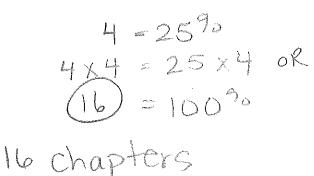
$28 - 10\%$ is 2.80 so
$20\% \times 2 = 5.60$

$\begin{array}{r} 2\overset{7}{8}.60 \\ - 5.60 \\ \hline \boxed{\$22.40} \end{array}$

5. Convert each to a percentage, then list them from greatest to least percent:
$\frac{1}{3}$, 40%, $\frac{1}{4}$, and 0.3
(33%) (25%) (30%)

$\boxed{40\%, \frac{1}{3}, .3, \frac{1}{4}}$

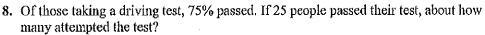6. What is 232% written as a mixed number?

$2\frac{32}{100} = \boxed{2\frac{8}{25}}$

7. Ward finished 4 chapters in his book. This is 25% of the chapters in the book. How many chapters are in the book?

$4 = 25\%$
$4 \times 4 = 25 \times 4$ OR
$\boxed{16} = 100\%$

$\frac{25}{100} = \frac{4}{x}$

$400 = 25x$
$\frac{400}{25} = \frac{25x}{25}$

16 chapters

$\boxed{x = 16}$

8. Of those taking a driving test, 75% passed. If 25 people passed their test, about how many attempted the test?

$$\frac{75}{100} = \frac{25}{x}$$

$$x = 33.\overline{3}$$
$$\sim 33 \text{ people}$$

9. What is $7\frac{3}{25}$ written as a percent?

$$\frac{3}{25} = \frac{12}{100} + 7 = \boxed{712\%}$$

10. Carley got a 82% on her first english test, a $\frac{22}{25}$ on her second test, and a 0.86 on her third test. Arrange the scores from least to greatest.

$$\boxed{82\%, 0.86, \frac{22}{25}}$$

$$\frac{22}{25} = \frac{88\%}{100} \qquad 86\%$$

Use a percent proportion to find each answer.

11. What is 40% of 70?

$$\frac{40}{100} = \frac{x}{70} \qquad 100x = 28$$

$$\boxed{x = 28}$$

12. What is 70% of 420?

$$\frac{70}{100} = \frac{x}{420} \qquad \boxed{x = 294}$$

13. Coal contains several elements in addition to carbon. Radium makes up 0.0097 of coal. What is 0.0097 written as a percent?

$$.0097 = \boxed{.97\%}$$

14. What is $\frac{13}{20}$ written as a percent?

$$\frac{13 \times 5}{20 \times 5} = \frac{65}{100} = \boxed{65\%}$$

15. During a baseball tournament, Bernard had 70 at bats and had 21 hits. He says he had a hit 30% of his at bats. Is Bernard correct? Explain why or why not.

$$\frac{30}{100} = \frac{21}{70}$$

21 = 21 yes, he is correct. See proportion

16. The original price of a movie ticket is $12. The sale price is 40% off the original price. What is the sale price of the movie ticket?

$$\$12 = 10\% = 1.20 \times 4 =$$

$$4.80, 50$$

$$\begin{array}{r} 1\;1 \\ {}^{0}12.00 \\ -\;\;4.80 \\ \hline \$7.20 \end{array}$$

Use a problem-solving model to solve each problem.

17. Marianne's basketball team won 75% of their games last season. If the teams played 20 games, how many games did the teams lose? Use a problem-solving model to solve.

$$\frac{75}{100} = \frac{x}{20} = 100x = 150\cancel{0}$$

$$x = 15 \text{ games}$$

$$\begin{array}{r} 50 \\ 20 - 15 = 5 \text{ games} \end{array}$$

18. An archer practiced shooting arrows at a target for four weeks. The table shows the archer's success rates in hitting the bullseye. In which week did the archer have the highest success rate?

Week	Bullseyes	
1	10 out of 25	= 40%
2	60%	
3	0.7	= 70%
4	$\frac{15 \times 5}{20 \times 5} = \frac{75}{100}$	= 75%

week 4 = 75%