Math 7 Practice Quiz (2-5 & 2-8)
(% Change & % Error & Simple Interest)

Name Key
Date _____ Block _____

Solve these problems showing the steps we discussed in class.

1) Austin estimates the weight of his dog to be 18 pounds. The actual weight of the dog is 25 pounds. Find the percent error. Round answer to the nearest whole number percent.

$25 - 18 = 7$

$\frac{\text{error}}{\text{actual}} \quad \frac{n}{100} = \frac{7}{25}$

$n = 28$

28% error

2) A basketball player averaged 26.8 points per game last year and 25.6 games this year. Find the percent change. Round answer to the nearest tenth of a percent.

$26.8 - 25.6$

$26.8 - 25.6 = 1.2$

$\frac{\text{decrease}}{\text{start \#}} \quad \frac{n}{100} = \frac{1.2}{26.8}$

$n = 4.477$

4.5% decrease

3) Meg estimates that there are 800 marbles in the jar. There are actually 725 marbles in the jar. Find the percent error. Round to the nearest tenth of a percent.

$800 - 725$

$\frac{\text{error}}{\text{actual}} \quad \frac{n}{100} = \frac{75}{725}$

$n = 10.3448$

10.3% error

4) In 2013 enrollment at Irvine Middle School was 450 students. In 2014 enrollment was 600 students. Find the percent change. Round to the nearest whole number percent.

$450 \rightarrow 600$

$600 - 450 = 150$

$\frac{\text{increase}}{\text{start}} \quad \frac{n}{100} = \frac{150}{450}$

$n = 33.\overline{3}$

33% increase

5) Andrew puts $700 into his savings account. The account pays 1.5% simple interest. At the end of four years, how much interest will he have earned?

$i = P \cdot r \cdot t$

$i = 700(.015)(4)$

$i = 42$

$42

6) Ben received a student loan for $20,000. At the end of 4 years he will have paid $2000 in interest. What is the simple interest rate on the student loan?

$i = P \cdot r \cdot t$

$2000 = 20{,}000 \cdot r \cdot (4)$

$2000 = 80{,}000\, r$

$\frac{2000}{80{,}000} = \frac{80{,}000\, r}{80{,}000}$

$.025 = r$

2.5%

7) Susie borrows $2000 at 3% simple interest rate. If her loan is for 18 months, find how much interest she will have to pay on the loan.

$i = P \cdot r \cdot t$

$i = 2000(.03)(1.5)$

$i = 90$

$90

8) Julia's grandmother gave her $5,000. She invested the money in an account that earned 12% simple interest. At the end of 2 years, how much money was in her account?

5000 + interest

$i = P \cdot r \cdot t$

$i = 5000(.12)(2)$

$i = 1200$

$5000 + 1200 = 6200$

$6200