Simple Interest (% review) – Worksheet #4

1) Judy borrowed $230,000 through a simple interest loan. The loan was for 3 years, and carried an interest rate of 7.25%. How much did Judy have to pay back altogether?

\[ I = \text{prt} \]
\[ I = (230,000 \times 0.0725 \times 3) \]
\[ I = 50,025 \]
Total = $280,025

4) Sophia closed out a 45-year account today. She accumulated $90,000 in interest because of a healthy 8% interest rate. What was her initial deposit?

\[ I = \text{prt} \]
\[ 90,000 = p \times 0.08 \times 45 \]
\[ \frac{90,000}{3.6} = p \]
\[ 25,000 = p \]

2) Kennedy earned $81 in interest over the last 3 years, after he had initially deposited $4,500 in a savings account. What was the interest rate?

\[ I = \text{prt} \]
\[ 81 = (4500) r \times (3) \]
\[ \frac{81}{13,500} \times 100 = r \]
\[ 0.006 = r \]

5) A worker found that 35% of the toys in Aisle #1 were broken. There were 240 total toys in that aisle. How many toys were broken?

\[ \text{Part} = \% \text{ of Whole} \]
\[ \frac{P}{240} = 0.35 \]
\[ P = 84 \]
84 broken toys

3) Jackson paid $95.55 in interest charges on a simple interest loan for $1300. If the interest rate was 4.9%, how many MONTHS was the loan for?

\[ I = \text{prt} \]
\[ 95.55 = (1300)(0.049) \times t \]
\[ 95.55 = 63.7 t \]
\[ \frac{95.55}{63.7} = t \]
\[ 15 = t \]

6) Of the 16 games the Eagles played, 6 of them were televised on national TV. What percentage of games were NOT televised nationally?

\[ \text{Part} = \% \text{ of Whole} \]
\[ \frac{6}{16} \times 100 = 37.5\% \]

\[ 0.375 = k \]
\[ 62.5\% \]
7) Last year, Mr. Sniffles made $40,000 as a base salary. This year he will make $56,000 as a base salary. What was the percent of increase/decrease in his base salary?

\[
\text{Change} = \% \text{ of Orig.} \\
\frac{16,000}{40,000} = \frac{M}{40,000} \\
0.4 = M \\
40\% \text{ increase}
\]

10) Aaron used a 20% off coupon to get a guitar for $124.23. What was the original price of the guitar?

\[
\begin{align*}
124.23 &= 0.8 \times k \\
155.29 &= k
\end{align*}
\]

8) Two weeks ago, 25 students were failing Mr. Schneeblie’s Science class. This week, that number has decreased by 80%. How many students are currently failing Science class?

\[
\begin{align*}
\text{Change} = \% \text{ of Orig.} \\
Y &= 0.8 \times 25 \\
Y &= 20 \\
-20 \text{ students}
\end{align*}
\]

11) The Gregor family racked up a dinner bill of $158.98, but were given a 10% discount because their cousin owns the restaurant. What was their new bill?

\[
\begin{align*}
\text{N.P.} &= (\% \text{ on} \frac{Y}{\text{ Orig}}) \\
\text{N.P.} &= 0.9 \times 158.98 \\
\text{N.P.} &= 143.082
\end{align*}
\]

9) Barry paid $52.70 for a new pair of basketball shoes after a 15% discount. What was the original price of the shoes?

\[
\begin{align*}
\text{N.P.} &= (\% \text{ on} \frac{Y}{\text{ Orig}}) \\
52.7 &= 0.85 \times B \\
62 &= B \text{ (rounded)}
\end{align*}
\]

12) In 2002, the average ticket for Super Bowl was $500. By 2012, that number was up to $900. What was the percent of increase/decrease over that 10-year period?

\[
\begin{align*}
\text{Change} = \% \text{ of Orig.} \\
400 &= M \times 500 \\
0.8 &= M \\
80\% \text{ increase}
\end{align*}
\]