

HW: Worksheet/7-19, 21

Warm up:

1) What is 14% of 98?

~~$$\frac{14}{100} = \frac{x}{98}$$~~

$$\frac{100x}{100} = \frac{1372}{100}$$

$$x = 13.72$$

$$0.14(98)$$

$$13.72$$

2) A store sold 42 books in December. This is 70% of the books that they sold in November. How many books did they sell in November?

~~$$\frac{70}{100} = \frac{42}{x}$$~~

$$\frac{70x}{70} = \frac{4200}{70}$$

$$x = 60$$

60 books

~~$0.7x = 42$~~

3) Jake scored 24% of the points in the most recent basketball game. If there were a total of 125 points scored in the basketball game, how many did Jake score?

~~$$\frac{24}{100} = \frac{x}{125}$$~~

$$\frac{100x}{100} = \frac{3000}{100}$$

$$x = 30$$

$$0.24(125)$$



30 points

HW Solutions

② 100°C

$$\frac{100 - 97.5}{100} = \frac{2.5}{100} = 0.025$$

2.5%

④ 35.5%

$$100 + 35.5 = 135.5\%$$

$$100 - 35.5 = 64.5\%$$

$$\begin{array}{r} 1.355x = 15.6 \\ \hline 1.355 \quad 1.355 \\ x = 11.51 \end{array}$$

$$\begin{array}{r} 0.645x = 15.6 \\ \hline 0.645 \quad 0.645 \\ x = 24.19 \end{array}$$

11.51cm or 24.19cm

(2)

$$\frac{34.5 - 34.1}{34.1} = 1.17\%$$

$$\frac{34.9 - 34.1}{34.1} = 2.35\%$$

$$\frac{34.2 - 34.1}{34.1} = 0.29\%$$

$$\frac{34.1 - 33.4}{34.1} = 2.05\%$$

$$\frac{35.9 - 34.1}{34.1} = 5.28\%$$

$$\frac{1.17 + 2.35 + 0.29 + 2.05 + 5.28}{5}$$

$$2.23\%$$

$$\textcircled{1} \quad \frac{250-240}{240} = \frac{10}{240} = \textcircled{4.17\%}$$

$$0.041\overline{666666}$$

$$\textcircled{4.17\%}$$

If you invest \$200 in an account that gains 4% interest for the year, how much money do you make in interest? How much total money would you have at the end of the year?

$$0.04(200) = \$8$$

$$200 + 8 \quad \$208$$

After the first year, you take the interest and spend it on clothes and invest the original \$200 again for another year. How much total interest would you have made for the two years?

$$\$16$$

Interest that is applied to the initial amount only is called **simple interest**.

The initial amount is called the **principal**.



When is interest calculated like
this in the real world?

CD's

Simple Interest

$$I = prt$$

interest

principal

rate
(% as a decimal)

time
(in years)

A diagram showing the simple interest formula $I = prt$. The variable I is labeled "interest" with a red arrow pointing to it. The variable p is labeled "principal" with a red arrow pointing to it. The variable r is labeled "rate (% as a decimal)" with a red arrow pointing to it. The variable t is labeled "time (in years)" with a red arrow pointing to it.

If you invest \$400 at 6% interest for 5 years, how much money do you make in interest?

$$I = prt$$

$$400(0.06)(5)$$

\$120

Anne invested \$2300 for 8 years at 3% interest.
How much total money does she have after the 8 years?

$$I = prt$$

$$2300(0.03)(8)$$

$$552$$

$$+ 2300$$

$$\text{\$}2852$$

Jerry borrowed \$800 at 12% interest. If he pays it back over the course of 6 months, how much interest will he pay on the loan?

$$I = prt$$

$$800(0.12)\left(\frac{6}{12}\right)$$

$$\$48$$

9 months ago, Lane invested \$8400 at 2.4%.
How much money does he have in the account
now?

$$I = prt$$

$$8400(0.024)\left(\frac{9}{12}\right)$$

$$151.20$$

$$+ 8400$$

$$\underline{\underline{\$ 8551.20}}$$

You have \$2500 to invest!



Which investment will result in the highest balance at the end?

Raersah Bucks

\$2500

~~Becker's Bucks~~

$$I = prt$$

5.7% for 4 years

$$2500(0.057)(4) = \$570$$

Sousa Savings

22% for 10 months

$$2500(0.22)\left(\frac{10}{12}\right) = \$458.33$$

McGarry Mutual

3.065% for 8 years

$$2500(0.03065)(8) = \$613$$

Sampson Safe

9.3% for 2 years

$$2500(0.093)(2) = \$465$$

McCaffrey's Credit Union

38.2% for 4 months

Alexandria Assets

0.89% for 34 years

Becker's Bucks

5.7% for 4 years

Sousa Savings

22% for 10 months

McGarry Mutual

3.065% for 8 years

Sampson Safe

9.3% for 2 years

McCaffrey's Credit Union

38.2% for 4 months

Alexandria Assets
0.89% for 34 years

