

Simple Interest, Compound Interest, and Present Value

Grade 11 College Math Formula Sheet

Student Name: _____

Simple Interest

Simple Interest:

$$I = \frac{P \times r \times t}{100} \quad \text{or} \quad I = Prt$$

I = Interest
 P = Principal (starting amount)
 r = rate ~~x~~ must be a decimal
 t = number of years

Compound Interest

Annual Compound Interest:

$$A = P \left(1 + \frac{r}{n} \right)^n$$

A =

P =

r =

n =

t =

Oct 30 / 17



$$I = Prt$$

Math 11C

Name _____ ID: 1

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Simple Interest Review

Date _____

Use simple interest to find the ending balance.

1) \$21,900 at 15.4% for 2 years

2) \$19,000 at 7.5% for 6 years

$$P = \$21,900$$

$$r = 0.154$$

$$t = 2$$

$$I = Prt$$

$$I = (21,900)(0.154)(2)$$

$$I = 6,745.20$$

$$+ 21,900$$

$$\hline \$28,645.20$$

3) \$44,000 at 13.4% for $1\frac{1}{4}$ years4) \$13,000 at 10.9% for $\frac{3}{4}$ years

Math 11C

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Simple Interest Review

Name _____ ID: 1

Date _____

Use simple interest to find the ending balance.

1) \$21,900 at 15.4% for 2 years

2) \$19,000 at 7.5% for 6 years

$$\begin{aligned}
 P &= \$19,000 \\
 r &= 0.075 \\
 t &= 6
 \end{aligned}$$

$$\begin{aligned}
 I &= Prt \\
 I &= (19,000)(0.075)(6) \\
 I &= \$8550.00 \\
 &+ \$19,000.00 \\
 \hline
 &= \$27,550.00
 \end{aligned}$$

3) \$44,000 at 13.4% for $1\frac{1}{4}$ years4) \$13,000 at 10.9% for $\frac{3}{4}$ years



3) \$44,000 at 13.4% for $1\frac{1}{4}$ years

$$P = 44000$$

$$R = 0.134$$

$$T = 1\frac{1}{4} = 1.25$$

$$I = (P)(R)(T) = (44000)(0.134)(1.25)$$

$$I = 7370$$
$$44000 + 7370 = \$51370$$

4) \$13,000 at 10.9% for $\frac{3}{4}$ years

6) \$51,100 at 11.9% for 2 years

5) \$8,500 at 1.2% for $7\frac{3}{4}$ years