

Pre-Algebra  
 Unit 8: Percent  
 8.5: Simple Interest

Find the interest.

1. \$500 at 4% for 3 years

$$I = P r t$$

$$I = (500) (.04) (3)$$

$$I = \$60$$

2. \$1200 at 7% for 5 years

$$I = P r t$$

$$I = (1200) (.07) (5)$$

$$I = \$420$$

3. \$750 at 6% for 18 months  
 (1.5 years)

$$I = P r t$$

$$I = (750) (.06) (1.5)$$

$$I = 67.50$$

4. \$1500 at 8.5% for 6 months  
 (1/2 year)

$$I = P r t$$

$$I = (1500) (.085) (.5)$$

$$I = \$63.75$$

Find the annual interest rate.

5.  $I = \$200$ ,  $P = \$1000$ ,  $t = 4$  years

$$I = P r t$$

$$200 = (1000) r (4)$$

$$200 = 4000 r$$

$$.05 = r$$

$$5\%$$

6.  $I = \$30$ ,  $P = \$600$ ,  $t = 2$  years

$$I = P r t$$

$$30 = (600) r (2)$$

$$30 = 1200 r$$

$$.025 = r$$

$$2.5\%$$

7.  $A = \$2650$ ,  $P = \$2500$ ,  $t = 9$  months

$$A = P + P r t$$

$$2650 = 2500 + (2500) r (.75)$$

$$2650 = 2500 + 1875r$$

$$150 = 1875r$$

$$.08 = r$$

$$8\%$$

9 months =  
 75% of a  
 year

15 months = 1.25 of a year

8.  $A = \$875, P = \$800, t = 15 \text{ months}$

7.5%

$$A = P + P r t$$

$$875 = 800 + (800) r (1.25)$$

$$875 = 800 + 1000 r$$

$$75 = 1000 r$$

$$.075 = r$$

Find the amount of time.

9.  $I = \$144, P = \$400, r = 6\%$

6 years

$$I = P r t$$

$$144 = (400) (.06) t$$

$$144 = 24 t$$

$$6 = t$$

10.  $I = \$236.25, P = \$750, r = 4.5\%$

7 years

$$I = P r t$$

$$236.25 = (750) (.045) t$$

$$236.25 = 33.75 t$$

$$7 = t$$

11.  $A = \$3587.50, P = \$3500, r = 5\%$

6 months

12.  $A = \$2108.75, P = \$2000, r = 7.25\%$

9 months

$$A = P + P r t$$

$$3587.50 = 3500 + (3500) (.05) t$$

$$3587.50 = 3500 + 175 t$$

$$87.50 = 175 t$$

$$.05 = t$$

$$A = P + P r t$$

$$2108.75 = 2000 + (2000) (.0725) t$$

$$2108.75 = 2000 + 145 t$$

$$108.75 = 145 t$$

$$.75 = t$$