

Math Review - Chapter 2 and 3

$$I = Prt$$

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

Mod version?

Name: _____

Date: _____

1. What is the future amount of \$12,000 invested for 5 years at 14% compounded monthly?

$$P \quad t \quad r \quad n$$

$$12,000 \left(1 + \frac{0.14}{12} \right)^{60}$$

$$(1.0116)^{60}$$

$$12,000 (2.0056)$$

$$n = 12$$

\$24,067.32

2. What is the future amount of \$800 invested for 1 year at 20% compounded quarterly?

$$P \quad t \quad r \quad n$$

$$800 \left(1 + \frac{0.20}{4} \right)^4$$

$$800 (1.05)^4$$

$$800 (1.2165)$$

\$972.41

3. Find the future value of \$350 which compounds at 9% semiannually for 4 years.

$$P \quad r \quad n \quad t$$

$$350 \left(1 + \frac{0.09}{2} \right)^8$$

$$350 (1.045)^8$$

$$350 (1.422)$$

\$497.74

4. Find the total amount in a bank account if \$1000 is invested at 8% simple interest for 3 years.

$$I = Prt$$

$$= (1000)(0.08)(3)$$

$$= 240$$

\$1240.00
Total

5. Find the simple interest rate needed to earn \$500 interest if you invest \$2000 for 3 years.

$$r = \frac{I}{Pt} = \frac{500}{(2000)(3)} = 0.08\bar{3} \times 100$$

8.3%

6. Find the time it takes for \$5000 to increase to \$5600 if the bank offers 10% simple interest.

$$t = \frac{I}{Pr} = \frac{600}{(5000)(0.10)} = \frac{600}{500} = 1.2 \text{ years}$$

12. Rhonda sells peanuts at the BC Lions football games. She earns \$30 per game plus 15¢ for each bag she sells. She averages about 350 bags sold per game. How much will she earn over the 8 games she works during the season?

$$30 \times 8 = 240$$

$$0.15 \times 350 \times 8 = 420$$

$$\boxed{\$660}$$

13. Alex works at a variety store earning \$10.30/h. He usually works 40h per week. Last week he worked an extra 8 hour shift and earned time and a half. What was Alex's gross income for the week?

$$40 \times 10.30 = 412$$

$$8 \times 1.5 \times 10.30 = 123.6$$

$$\boxed{\$535.60}$$

14. Anthony earns an annual salary of \$42 000.

a) What will Anthony gross per week? $\boxed{\$807.69}$

b) Determine Anthony's Pay deductions (claim code 1)

EI (1.88%) $\boxed{\$15.18}$ $807.67 \times 0.0188 = \$15.18$

CPP (4.95%) - Don't forget the exemption $\boxed{\$36.65}$ $807.67 - 67.31 = 740.36$
 $740.36 \times 0.0495 = 36.65$

*Chucks
 NB Income Tax $\underline{57.80}$

Fed. Income Tax $\underline{\$77.75}$

c) What is Anthony's net weekly income? $\underline{\$620.31}$

15. Marissa works 40 h a week earning \$14.25/h.

a) Find gross weekly salary $\underline{40 \times 14.25 = \$570}$

b) Find her deductions (Claim code 2)

EI $\underline{570 \times 0.0188 = \$10.72}$

CPP $570 - 67.31 = 502.69 \times 0.0495 = \boxed{\$24.88}$

*Chucks
 NB Income Tax $\underline{32.40}$

Fed Income Tax $\underline{42.00}$

net pay: $\$460$