

Sam wants to invest \$975.00. His bank offers an investment option that earns **simple interest** at a rate of 4.25% per year. How much **interest** would Sam make on his investment after 5 years?

$$I = Prt$$

$$I = ?$$

$$I = 975(0.0425)(5)$$

$$P = 975$$

$$I = \$207.19$$

$$r = 0.0425$$

$$t = 5$$

Dawn wants to invest \$9500.00. His bank offers an investment option that earns **interest compounded** quarterly at a rate of 4.2% per year for 8 years. How much would he have after 8 years

$$A = P(1 + r/n)^{nt}$$

$A =$
 $P = 9500$
 $r = 0.042$
 $n = 4$
 $t = 8$

$A = 9500(1 + \frac{0.042}{4})^{32}$
 $A = 9500(1.0105)^{32}$
 $A = 9500(1.3968999)$
 $A = 13270.45$

Handwritten notes: 32 and $(4)(8)$ are circled in red.

Jason wants to invest \$5300.00. His bank offers an investment option that earns **interest compounded** monthly at a rate of 3.9% per year for 6 years. How much **interest** would this investment make?

$$A = ?$$

$$P = 5300$$

$$r = 0.039$$

$$n = 12$$

$$t = 6$$

$$A = P(1 + r/n)^{nt}$$

$$A = 5300(1 + \frac{0.039}{12})^{(12)(6)}$$

$$A = 5300(1.00325)^{72}$$

$$A = 5300(1.263165)$$

$$A = 6694.78$$

$$6694.78 - 5300 = 1394.78$$

The **interest** earned on a deposit is \$45.00 with an interest rate of 3.8% per annum. If the money was invested for 6 years, **what is the principal?**

$$I = Prt$$

$$I = 45$$

$$45 = P(0.038)(6)$$

$$P = ?$$

$$\frac{45}{0.228} = \frac{P(0.228)}{0.228}$$

$$r = 0.038$$

$$P = \$197.37$$

$$t = 6$$

Calculate the **interest, the balance due** and **minimum payments** on the following credit cards.
(5.00% or \$10.00, whichever is greater).

Unpaid balance:	\$614.00
Interest rate per annum:	17.25% per annum
Time:	47 days

Interest:

$$I = Prt$$

$$I = 614(0.1725)\left(\frac{47}{365}\right)$$

$$I = \$13.64$$

Minimum Payment:

$$614 \times 0.05 = 30.70 \text{ or } 10.00$$

Ben borrowed 8560.36 from the TD Bank at an annual rate of 5.75% with an amortization period of 3 years. Use your personal loan calculator to answer the questions.

PERSONAL LOAN PAYMENT CALCULATOR: MONTHLY PAYMENT PER \$1000.00 BORROWED (INTEREST COMPOUNDED MONTHLY)					
Interest rate (%)	Term in years				
	1	2	3	4	5
3.00	84.69	42.98	29.08	22.13	17.97
3.25	84.81	43.09	29.19	22.24	18.08
5.00	85.61	43.87	29.97	23.03	18.87
5.25	85.72	43.98	30.08	23.14	18.99
5.50	85.84	44.10	30.20	23.26	19.10
5.75	85.95	44.21	30.31	23.37	19.22
6.00	86.07	44.32	30.42	23.49	19.33
6.25	86.18	44.43	30.54	23.60	19.45
6.50	86.30	44.55	30.65	23.71	19.57
6.75	86.41	44.66	30.76	23.83	19.68
7.00	86.53	44.77	30.88	23.95	19.80

a) What is the monthly payment?

$$\frac{8560.36}{1000} = 8.56036 \times 30.31$$

$$= 259.46$$

b) How much will he pay back in total?

$$3 \times 12 = 36$$

$$259.46 \times 36 = 9340.56$$

c) What is the finance charge?

$$9340.56 - 8560.36 = 780.20$$

Calculate the **interest, the balance due** and **minimum payments** on the following credit cards.
(5.00% or \$10.00, whichever is greater).

Unpaid balance:	\$95.00
Interest rate per annum:	16.89% per annum
Time:	55 days

Interest:

Minimum Payment:

