

## 7.1 Simple Interest

- Express the following interest rates as (r) in the simple interest formula.  
a) 6%      b) 4.5%      c) 1.25%      d) 0.85%      e) 32%
- Express the following lengths of time as (t) in the simple interest formula.  
a) 18 months      b) 16 weeks      c) 88 days      d) 4 years      e) 52 weeks
- Complete the following chart.

Principal (\$)	Interest Rate %	Time	Interest Earned (\$)	Total Amount (\$)
2000	4.5	3 months		
550	0.5	36 months		
1500	1.5		320	
	7.2	16 weeks	100	
2500		18 months	275	
	6.75	240 days	55	
10000		6 weeks	125	
780	1.3		58	

- \$300 is invested for 2.5 years at 6% simple interest. How much interest is earned?
- Joe borrowed \$500 from his parents to buy an ipod. They charged him 2.5% simple interest. He paid them back in 14 months. How much interest did he pay them? How much did he pay them in total?
- Peter invested in a GIC that paid 3.25% simple interest. In 36 months, he earned \$485. How much did he invest originally?
- What rate of simple interest is needed for \$700 to double, in 3 years?
- Kadeem's investment matured from \$1300 to \$1750. It was invested at a simple interest rate of 4.25%. How long was it invested for?
- \$4500 was invested at a  $5\frac{3}{8}\%$  simple interest for 300 days. How much interest was earned? What was the total amount of the investment?
- \$600 is invested at 4% simple interest for 2 years.
  - How much interest is earned?
  - If the interest rate is doubled to 8% is the interest earned doubled?
  - If the time was doubled to 4 years, would the interest earned be doubled?

### Solutions:

1.a) 0.06      b) 0.045      c) 0.0125      d) 0.0085      e) 0.32      2.a) 1.5      b) 0.30769      c) 0.24109      d) 4      e) 1

3. Complete the following chart.

Principle (\$)	Interest rate %	Time	Interest Earned (\$)	Total Amount (\$)
2000	4.5	3 months	22.5	2022.5
550	0.5	36 months	8.25	558.25
1500	1.5	14.2222	320	1820
4513.89	7.2	16 weeks	100	4613.89
2500	7.33333	18 months	275	2775
1239.20	6.75	240 days	55	1294.20
10000	10.8333	6 weeks	125	10125
780	1.3	5.72	58	

- \$45
- \$14.58, \$514.58 in total
- \$4974.36
- 33.33%
- 8.14 years
- \$198.80 earned, total investment: \$4698.80
- \$600 is invested at 4% simple interest for 2 years.
  - \$48      b) yes      c) yes, if interest still held at 4%