Name: _____ Date: _____

BLM 8–3

Section 8.1 Simple and Compound Interest

1. Tiffany invested $6000 in a plan that pays 5.55% per year, compounded annually, for 7 years. Make a table of values and sketch a graph of her investment.

2. Marc and Mike are twins. On their 15th birthday, they each receive $2000 from their grandmother. Marc decides to invest his money in a simple interest plan that offers interest at 3% per year. Mike decides to invest in a compound interest plan that offers interest at 3% per year, compounded annually. Make a table of values to compare the total value of each plan at the end of each year for the next 7 years.

3. Determine the difference in the amount of interest paid on each pair of investments.
- **a)** $5000 at 3% simple interest or $5000 at 3% per year, compounded yearly, both for 10 years
- **b)** $16 000 at 6.25% simple interest or $16 000 at 6.25% per year, compounded yearly, both for 6 years
- **c)** $480 at 4.2% simple interest or $480 at 4.2% per year, compounded yearly, both for 20 years
- **d)** $24 800 at 7.35% simple interest or $24 800 at 7.35% per year, compounded yearly, both for 25 years

4. Aaron invested $4500 at 3.75% compounded annually for 8 years. Make a table of values and sketch a graph of his investment.

5. In 3 years, Phil wants to purchase a 50-inch HD plasma TV for $4500 including taxes. He deposits $3100 into a savings plan today that pays 4.2% per year, compounded yearly. How much will he need to add to this investment in 3 years to have enough to buy the TV?

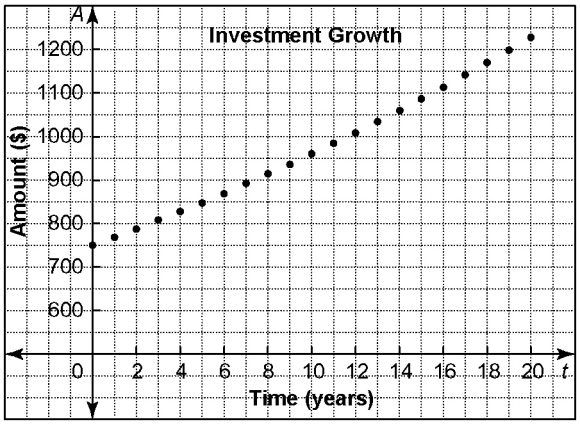
6. A financial institution offers Mikela two investment options.

Plan A: 5.0% per year, simple interest

Plan B: 4.3% per year, compounded yearly
- **a)** If she has $4000 to invest, which plan should she choose if she can invest for
  - **i)** 2 years?
  - **ii)** 10 years?
- **b)** How much additional interest would she have made by choosing the best plan for each amount of time in part a)?

7. Eight years ago, Hannah's parents invested $6000 at 4.8% per year, compounded annually, to help pay for her college education.
- **a)** Make a table of values and sketch a graph of the investment.
- **b)** Describe how this investment grows compared to a plan paying 4.8% simple interest per year.

8. The graph shows the growth of a $750 investment at 2.5% per year, compounded annually, over 20 years.



- **a)** Use the graph to estimate the value of the investment after 5 years.
- **b)** Use the graph to estimate how long it would take the investment to grow to $1400.
- **c)** Describe how the shape of the graph would change if the annual interest rate was less than 2.5%, but still compounded annually.