

## Worksheet on Simple and Compound Interest

Use these formulas to answer the questions

### Simple Interest:

Amount of Money after time = Amount invested initially ( 1 + rate x time)

So,  $A = P(1 + rt)$  where P stands for the Principal (initial investment)

### Compound Interest:

Amount of Money after time = Amount invested initially ( 1 + rate)<sup>time</sup>

So,  $A = P(1 + r)^t$

1. Invest \$5000 at 4% simple interest for 1 year.
2. Invest \$5000 at 4% compound interest for 1 year.
3. Invest \$5000 at 4% simple interest for 10 years.
4. Invest \$5000 at 4% compound interest for 10 years.
5. How much interest would you earn in #3?
6. How much interest would you earn in #4?
7. Invest \$40,000 at 6% simple interest for 30 years.
8. Invest \$40,000 at 6% compound interest for 30 years.
9. How much interest would you earn in #7?
10. How much interest would you earn in #8?
11. What interest rate would you need to turn \$40,000 into a millions dollars in 30 years using compound interest?
12. Is the rate in #11 realistic?
13. In what situation(s) would you prefer simple interest?
14. Is it realistic to assume that one day you would have \$40,000 of excess money to invest? If so, give at least one scenario.