

Solution 1.51

Emily and Madison both invest \$1000 at 10% per year for 4 years. Emily receives simple interest and Madison gets compound interest. Use a spreadsheet and cell reference formats to develop relations that show a total of \$64 more interest for Madison at the end of the 4 years. Assume no withdrawals or further deposits are made during the 4 years.

Solution:

Spreadsheet shows relations only in cell reference format. Cell E10 will indicate \$64 more than cell C10.

| | A | B | C | D | E |
|----|------------------|-----------------|-----------|-----------------|-----------|
| 1 | Initial amount = | 1000 | | i = | 0.1 |
| 2 | | | | | |
| 3 | | Simple | | Compound | |
| 4 | Year | Interest, \$ | Total, \$ | Interest, \$ | Total, \$ |
| 5 | 0 | | = \$B\$1 | | = \$B\$1 |
| 6 | 1 | = \$B\$1*\$E\$1 | = C5 + B6 | = \$E5 * \$E\$1 | = E5 + D6 |
| 7 | 2 | = \$B\$1*\$E\$1 | = C6 + B7 | = \$E6 * \$E\$1 | = E6 + D7 |
| 8 | 3 | = \$B\$1*\$E\$1 | = C7 + B8 | = \$E7 * \$E\$1 | = E7 + D8 |
| 9 | 4 | = \$B\$1*\$E\$1 | = C8 + B9 | = \$E8 * \$E\$1 | = E8 + D9 |
| 10 | Total | =SUM(B6:B9) | = C9 | =SUM(D6:D9) | = E9 |