

Quiz 6.2

Mr. Towne currently sells giant pet rocks for \$35.50 but the price rises 3% each year due to inflation.

- 1) Write a recursive routine that models the situation. _____
- 2) Find the price of a giant pet rock after one year **and** write the expression that would be used to find it. _____
- 3) Find the price of a giant pet rock after twenty years **and** write the expression that would be used to find it. _____

Ms. Berg has written the following in her checking account book:

$$y = 8000(1 + 0.03)^4$$

- 4) How much money did she begin with? _____
- 5) How many years did she have the money in the bank? _____
- 6) What interest rate is she earning? _____

Write the expression that would calculate each of the following. You **do not** have to calculate the answer.

- 7) Northworst Airlines has a ticket for next week from Minneapolis to New York on sale today for \$457 but it will rise 5% a day. How much will it cost tomorrow? _____
- 8) Ms. Rittler knows the names of 39,782 countries, rivers, cities, mountain ranges, and imaginary friends. She learns 4% more each week. How many will she know next week? _____
- 9) Ms. Mortenson suspended 50 students last week. Because she likes spring, the number of students being suspended will decrease 25% each week. Find the number of students that she will suspend *three weeks from now*. _____
- 10) The amount of bacteria on Ms. Hoffman's desk grows 15% each day. If there are 500 bacteria today, how many will there be *in ten days time*? _____
- 11) Extra credit: The amount of bacteria on Ms. Berg's desk grows by 15 bacteria each day. If there are 500 bacteria today, how many will there be in ten days time? _____
- 12) Find the constant multiple of:
7, 9.38, 12.5692, 16.842728, 22.56925552, ... _____

Quiz 6.2

Mr. Towne has written the following in his checking account book:

$$y = 1200(1 + 0.09)^7$$

- 1) How much money did he begin with? _____
- 2) How many years did he have the money in the bank? _____
- 3) What interest rate is he earning? _____

Ms. Berg currently sells large plastic flamingos for \$24.50 but the price rises 7% each year due to rising production costs.

- 4) Write a recursive routine that models the situation. _____
- 5) Find the price of a large plastic flamingo after one year **and** write the expression that would be used to find it. _____
- 6) Find the price of a large plastic flamingo after ten years **and** write the expression that would be used to find it. _____

Write the expression that would calculate each of the following. You **do not** have to calculate the answer.

- 7) Cheep Credit Bank has 1200 loans that are bad and the number of bad loans is increasing 3% each month. How many bad loans will there be next month? _____
- 8) Ms. Rittler knew the names of 123,456 countries, rivers, cities, mountain ranges, and imaginary friends. She forgets 7% each year. How many will she know next year? _____
- 9) Ms. Mortenson suspended 50 students last week. Because she hates spring, the number of students being suspended will increase 34% each week. Find the number of students that she will suspend *four weeks from now*. _____
- 10) The amount of bacteria on Ms. Hoffman's desk decreases 2% each minute when she uses Bug-B-Gone™ spray. If there are 300 bacteria now, how many will there be in twenty minutes? _____
- 11) Extra credit: The amount of bacteria on Ms. Berg's desk decreases by 2 bacteria each minute. If there are 300 bacteria now, how many will there be in twenty minutes? _____
- 12) Find the constant multiple of:
4, 13.04, 42.5104, 138.583904, 451.783527, ... _____