Name _____ Date _____ Class _____

Additional Practice

Investigation 5

Growing, Growing, Growing

1. In parts (a)–(f), write the expression in an equivalent form using exponents. Then write the expression in standard form.

a. $2^5 \times 2^5$

b. $4^3 \times 2^5$

c. 25^4

d. $\frac{3^4}{3}$

e. $10^2 \times 2 \times 5$

f. $3^3 \times 2^3$

2. In parts (a)–(d), find the units digit of the standard form of the expression.

a. 12^{10}

b. 11^{23}

c. 23^{19}

d. 17^{17}

3. Consider these three equations: $y = 0.625^x$, $y = 0.375^x$, and $y = 1 - 0.5x$.

a. Sketch graphs of the equations on one set of axes.

b. What points, if any, do the three graphs have in common?

c. In which graph does the y-value decrease at a faster and faster rate as the x-value increases?

4. Decide whether each statement is true or false. Explain your reasoning.

a. $3^5 + 3^5 = 3^{10}$

b. $5^4 + 2^4 = 7^4$

© Pearson Education, Inc., publishing as Pearson Prentice Hall. All rights reserved.