Name

11-1A Lesson Master

Questions on SPUR Objectives
See Student Edition pages 792–795 for objectives.

PROPERTIES Objective E

In 1–3, tell if the expression is a polynomial. If it is, give its degree. If it is not, explain why not.

1. $4x^7 - 7x^4$ _____

2. $7 \cdot 4^x$ _____

3. $3x^{1.5} - 2x^{-1}$ _____

In 4 and 5, a. write the polynomial in standard form, b. give its degree, and c. give its leading coefficient.

4. $3x + 5x^3 - 8x^2 + 14$

   a. _____

   b. _____

   c. _____

5. $9x^5 - \frac{2}{3}x^9 + 18x^{10} - \sqrt{3} \cdot x^4$

   a. _____

   b. _____

   c. _____

6. Let $f(x) = 2x^2 + 5$ and $g(x) = 4x^4 - 1$. Write each expression in standard form (using a CAS if necessary), and give its degree.

   a. $g(x) + f(x) =$ _____, degree = _____

   b. $f(g(x)) =$ _____, degree = _____

USES Objective H

In 7 and 8, refer to the following information. Every year Don saves a part of his summer earnings for college. The summer after 8th grade, he saved $1200. The summer after 9th grade, he saved $800; after 10th grade, $550; after 11th grade, $1100; and after 12th grade, $1400. He earns *r* annual interest.

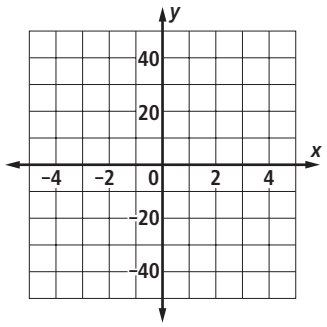
7. Write a polynomial using $x = 1 + r$ that gives the value of the account just after his last deposit. _____

8. How much will he have if he earns 3.8% annual interest? _____

REPRESENTATIONS Objective J

In 9–11, consider the polynomial $P(x) = 2x^4 + x^3 - 12x^2 + 5$.

9. Use a table of values to accurately graph $P(x)$ on the given axes at the right.



10. Estimate $P(-1.5)$ from the graph. _____

11. Calculate $P(-1.5)$ from the equation. _____