Name

5

LESSON MASTER 1-4 A

Questions on SPUR Objectives
See pages 65-68 for objectives.

Vocabulary

1. Give an example of a numerical expression. _____

2. Give an example of an algebraic expression. _____

3. What does it mean to ''evaluate an expression''?

_____

Skills Objective C

4. Evaluate $12y + 3$ when

   a. $y = 4$. _____ **b.** $y = 2.5$. _____ **c.** $y = 0$. _____

For 5–10, if the expression is algebraic write "algebraic." If the expression is numerical, evaluate it.

5. $\frac{3 + 15}{2(3)}$ _____

6. $4(2 + 7) - k$ _____

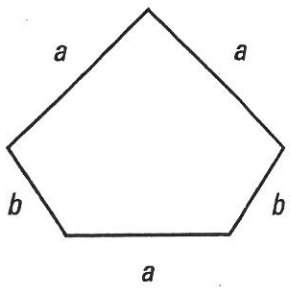
7. $40 - 3(11)$ _____

8. $2(3 + 2)^2 + 9$ _____

9. $a - \frac{4}{n}$ _____

10. $3^5 - 5^3$ _____

11.



The perimeter of this pentagon is $3a + 2b$. Find the perimeter when $a = 15.4$ and $b = 6.5$.

_____

12. What is the value of the BASIC expression (2 * 8 + 5)/(30 − 23)?

13. Write a key sequence to enter the following expression into a calculator. $\frac{40 \cdot 2 + 8}{47}$

14. **a.** Evaluate $10y^3$ when $y = 2$.

_____

b. Evaluate $(10y)^3$ when $y = 2$.

_____

c. Find a value for y so that the value of $10y^3$ is the same as the value for $(10y)^3$. _____

Show work

Name _____

LESSON MASTER 1-4 B

Questions on SPUR Objectives

Vocabulary

In 1–9, tell if each is a numerical expression, an algebraic expression, or neither.

1. $42ab$ _____
2. $7x = 21$ _____
3. $3^2 + 9(7 - 1)$ _____
4. $\frac{4m}{20}$ _____
5. g _____
6. $24.7 + 6(y^2 + 31)$ _____
7. $22 \geq u$ _____
8. $16 = 4^2$ _____
9. Finding the numerical value of an expression is called _____ the expression.

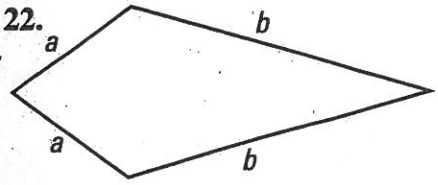
Skills Objective C: Evaluate numerical and algebraic expressions.

In 10–21, evaluate each expression when e = 5, f = 3.2, and g = 0.

10. $4e$ _____
11. $e + f$ _____
12. $7^2 + 22$ _____
13. $3(33 - 3^3)$ _____
14. $\frac{8e}{2}$ _____
15. $e - fg$ _____
16. $9 + \frac{5}{3}$ _____
17. $\frac{2e + f}{1.1} - 3eg$ _____
18. $e^2 + f^2 + g^2$ _____
19. $(8 + 7)(8 - 7)$ _____
20. $2(3 + 7)^2 - 6 \cdot 9$ _____
21. $6.1e + 2.9g$ _____

Show work

22.



The perimeter of the quadrilateral at the left is $2a + 2b$. Find the perimeter when $a = 6.75$ and $b = 14.4$.

_____

Name _____

23. What is the value of the BASIC expression (4 * 3 + 9)/(40 − 38)?

In 24 and 25, write each expression in BASIC.

24. $7(2.2 + 9)$

25. $(5 \cdot 6 - 3.07)^5$

In 26 and 27, tell what you would input on a computer to evaluate each expression when u = 7 and v = 5.5.

26. $\frac{3u + 9}{v - 4}$

27. $5(u + v)^2$

28. Which expression, A or B, has the greater value? Explain your answer.

A = 50 − 25 − 10 − 5 B = 50 − (25 − (10 − 5))

Show work

29. **a.** Evaluate $4m^2$ when $m = 3$.

b. Evaluate $(4m)^2$ when $m = 3$.

c. Find a value of m so that the value of $4m^2$ is the same as the value of $(4m)^2$.

Review Objective A, Lesson 1-1

30. Which of the numbers 1, 2, and 7 are solutions of $11 + n = 18$?

31. Which of the numbers 3, 6, and 9 are solutions of $6 \cdot u - 11 = 19 + u$?

32. Which of the numbers 5, 9, and 18 are solutions of $7 \cdot e \leq 80$?

33. Which of the numbers 12, 17, and 24 are solutions of $\frac{h}{3} > 7$?