

Name

2-4B

Lesson Master

Questions on SPUR Objectives
See pages 125–127 for objectives.

SKILLS

Objective B

1. Which expression is *not* equal to $-(-2x + 5)$?
A $2x - 5$ B $2x + 5$ C $-5 + 2x$ D $-(-2x) - 5$
2. Describe the pattern that develops when you take a negative number to an even power and to an odd power. To find the pattern, consider $(-2)^1$, $(-2)^2$, $(-2)^3$, $(-2)^4$, $(-2)^5$, and so on.
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In 3–19, simplify.

3. $-(-(-(-m)))$ 4. $-(2p + 1)$ 5. $(-t)^6$ 6. $-(3z + 2)$
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7. $7k^2 - (k^2 + 5)$ 8. $-\left(\frac{1}{2}z - \frac{2}{3}\right)$ 9. $5x - (2x + 6)$ 10. $2r - \frac{1}{4}(8r + 16)$
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11. $(6xy - 4) - (2xy - 1)$ 12. $-(-(-(-k)^2))$ 13. $\ell^3 + m - n^2 - (-2\ell^3 + 3m - n^2)$
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14. $(0.5t - 1) - (0.7t - 2.1)$ 15. $(100.2y + 0.1) - 0.2(0.5y - 15)$
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16. $(4j + 1) - 6(j + 2)$ 17. $(-5f)(-f)(2f)$
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18. $(-5p)(-p^2)$ 19. $\frac{2 + d}{3} - \frac{2 - d}{3}$
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20. Write an expression for the opposite of $\frac{-3x - n}{2}$.
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PROPERTIES

 Objectives B and D

In 21-24, match each property with the example of the property.

- (a) Multiplication Property of -1
- (b) Opposite of Opposites Property
- (c) Opposite of a Sum Property
- (d) Opposite of a Difference Property
21. $2 + -(-1) = 2 + 1$ _____
22. $-(6 - x) = -6 + x$ _____
23. $-(2x + 3) = -2x - 3$ _____
24. $-1(k) + 6 = -k + 6$ _____

True or False In 25-30, decide whether the equation is true or false and then justify your answer.

25. $(-2)^2 = 4$ _____
26. $-2^2 = 4$ _____
27. $-(2)^2 = 4$ _____
28. $(-2)^3 = -8$ _____
29. $-2^3 = -8$ _____
30. $-(2)^3 = -8$ _____
31. Use the Opposite of Opposites Property to justify why $(-1)^{100}$ is positive and $(-1)^{101}$ is negative.

USES

 Objective B

32. Suppose you walk up 8 steps, then turn around and go back down n steps. You stop, and then continue down the stairs for another k steps. Express your location on the stairs in two different ways.
