

74. **CHALLENGE** A plastic cube is used to display an autographed baseball. The cube has an outer surface area of 54 square inches.
- What is the length of an outer edge of the cube?
 - What is the greatest volume the cube can possibly have? *Explain* why the actual volume inside of the cube may be less than the greatest possible volume.



MIXED REVIEW FOR TAKS

TAKS PRACTICE at classzone.com

REVIEW

Lesson 5.1;
TAKS Workbook

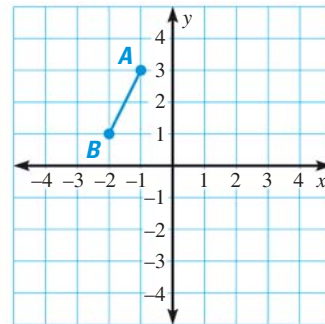
75. **TAKS PRACTICE** Which equation describes a line that has a y -intercept of -4 and a slope of 2 ? **TAKS Obj. 3**

(A) $y = -4x + 2$ (B) $y = 2(x - 4)$ (C) $y = 2x - 4$ (D) $y = -4(x + 2)$

REVIEW

TAKS Preparation
p. 350;
TAKS Workbook

76. **TAKS PRACTICE** \overline{AB} is shown in the coordinate plane. Find the coordinates of the endpoints of the image of \overline{AB} reflected across the y -axis. **TAKS Obj. 6**



- (F) $A'(-1, -3), B'(-2, -1)$
 (G) $A'(-1, 3), B'(-2, 1)$
 (H) $A'(1, -3), B'(2, -1)$
 (J) $A'(1, 3), B'(2, 1)$

QUIZ for Lessons 9.7–9.8

Factor the polynomial. (p. 600)

1. $x^2 - 400$

2. $18 - 32z^2$

3. $169x^2 - 25y^2$

4. $n^2 - 6n + 9$

5. $100a^2 + 20a + 1$

6. $8r^2 - 40rs + 50s^2$

Factor the polynomial completely. (p. 606)

7. $3x^5 - 75x^3$

8. $72s^4 - 8s^2$

9. $3x^4y - 300x^2y$

10. $a^3 - 4a^2 - 21a$

11. $2h^4 + 28h^3 + 98h^2$

12. $z^3 - 4z^2 - 16z + 64$

Solve the equation.

13. $x^2 + 10x + 25 = 0$ (p. 600)

14. $48 - 27m^2 = 0$ (p. 600)

15. $w^3 - w^2 - 4w + 4 = 0$ (p. 606)

16. $4x^3 - 28x^2 + 40x = 0$ (p. 606)

17. $3x^5 - 6x^4 - 45x^3 = 0$ (p. 606)

18. $x^3 - 121x = 0$ (p. 606)

19. **VOLUME** The cylinder shown has a volume of 72π cubic inches. (p. 600)

- Write a polynomial that represents the volume of the cylinder. Leave your answer in terms of π .
- Find the radius of the cylinder.

