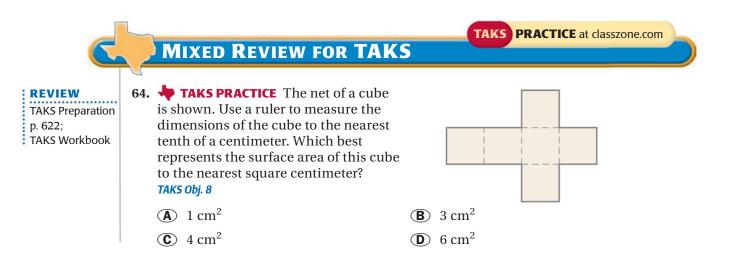**63. CHALLENGE** A bush cricket jumps from the ground into the air with an initial vertical velocity of 4 feet per second.

    a. Write an equation that gives the cricket's height (in feet) as a function of the time (in seconds) since it left the ground.

    b. After how many seconds is the cricket 3 inches off the ground?

    c. Does the cricket jump higher than 3 inches? *Explain* your reasoning using your answer from part (b).

MIXED REVIEW FOR TAKS

64. **TAKS PRACTICE** The net of a cube is shown. Use a ruler to measure the dimensions of the cube to the nearest tenth of a centimeter. Which best represents the surface area of this cube to the nearest square centimeter? *TAKS Obj. 8*

    (A) 1 cm^2 **(B)** 3 cm^2

    (C) 4 cm^2 **(D)** 6 cm^2

QUIZ *for Lessons 9.4–9.6*

Factor out the greatest common monomial factor. *(p. 575)*

  1. $16a^2 - 40b$ **2.** $9xy^2 + 6x^2y$ **3.** $4n^4 - 22n^3 - 8n^2$

  4. $3x^2 + 6xy - 3y^2$ **5.** $12abc^2 - 6a^2c$ **6.** $-36s^3 + 18s^2 - 54s$

Factor the trinomial.

  7. $r^2 + 15r + 56$ *(p. 583)*   **8.** $s^2 - 6s + 5$ *(p. 583)*   **9.** $w^2 + 6w - 40$ *(p. 583)*

 10. $-a^2 + 9a + 22$ *(p. 593)* **11.** $2x^2 - 9x + 4$ *(p. 593)*   **12.** $5m^2 + m - 6$ *(p. 593)*

 13. $6h^2 - 19h + 3$ *(p. 593)* **14.** $-7y^2 - 23y - 6$ *(p. 593)* **15.** $18c^2 + 12c - 6$ *(p. 593)*

Solve the equation.

 16. $(4p - 7)(p + 5) = 0$ *(p. 575)* **17.** $-8u^2 + 28u = 0$ *(p. 575)* **18.** $51x^2 = -17x$ *(p. 575)*

 19. $b^2 - 11b = -24$ *(p. 583)*   **20.** $m^2 + 12m = -35$ *(p. 583)*   **21.** $q^2 + 19 = -20q$ *(p. 583)*

 22. $3t^2 - 11t + 10 = 0$ *(p. 593)* **23.** $4y^2 + 31y = 8$ *(p. 593)*   **24.** $14s^2 + 12s = 2$ *(p. 593)*

25. BASEBALL A baseball player hits a baseball into the air with an initial vertical velocity of 72 feet per second. The player hits the ball from a height of 3 feet. *(p. 593)*

    a. Write an equation that gives the baseball's height as a function of the time (in seconds) after it is hit.

    b. After how many seconds is the baseball 84 feet above the ground?