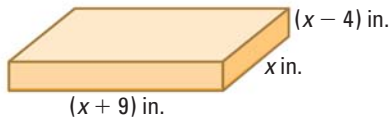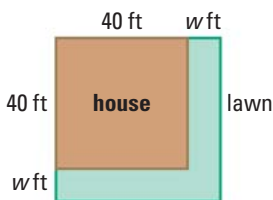## Lessons 9.5–9.8

MULTIPLE CHOICE

1. **CLAY DIMENSIONS** A block of clay has the dimensions shown. The clay has a volume of 180 cubic inches. Find the length, width, and height of the block. *TEKS A.4.A*
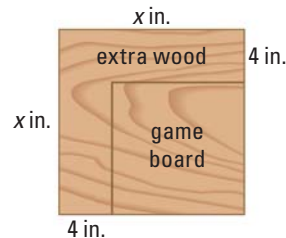

   $(x - 4)$ in.
   x in.
   $(x + 9)$ in.

   A 10 in., 6 in., 3 in.

   B 12 in., 3 in., 5 in.

   C 15 in., 6 in., 2 in.

   D 16 in., 5 in., 2 in.

2. **BASEBALL** You hit a baseball straight up into the air. The baseball is hit with an initial vertical velocity of 88 feet per second when it is 3 feet off the ground. After how many seconds does the ball first reach a height of 99 feet? *TEKS A.10.A*

   F 1.5 sec **G** 3 sec **H** 4 sec **J** 7 sec

3. **TILES** Each rectangular tile in a box of floor tiles has a width of x inches and is 2 inches longer than it is wide. Four of the tiles cover an area of 77 square inches. What are the dimensions of a tile? *TEKS A.10.A*

   A 2 in. by 4 in. **B** 3.5 in. by 5.5 in.

   C 4 in. by 6 in. **D** 5.5 in. by 7.5 in.

4. **GARDENING** A square house has a lawn on two sides. Together, the house and lawn form a square with the dimensions shown. The lawn is being reseeded. The gardener determined that the lawn has an area of 900 square feet. Find the width of the lawn. *TEKS A.10.A*

   40 ft w ft
   40 ft   **house**   lawn
   w ft
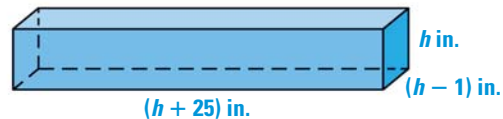
   F 10 ft **G** 15 ft **H** 25 ft **J** 90 ft

5. **TENNIS** A tennis player hits a ball with an initial vertical velocity of 63 feet per second from an initial height of 4 feet. After how many seconds does the tennis ball hit the ground? *TEKS A.10.A*

   A 1 sec **B** 4 sec **C** 6 sec **D** 7 sec

6. **GAME BOARD** You are making a square game board. You cut the game board from a square piece of wood, as shown. The area of the game board is 100 square inches. What is the area of the original piece of wood? *TEKS A.10.A*

   x in.
   extra wood   4 in.
   x in.   game board
   4 in.

   F 116 in.^{2} **G** 164 in.^{2}

   H 196 in.^{2} **J** 224 in.^{2}

7. **BOX** A box is a rectangular prism having the dimensions shown.

   h in.
   $(h - 1)$ in.
   $(h + 25)$ in.

   The box has a volume of 600 cubic inches. What is the area of the top of the box? *TEKS A.4.A*

   A 20 in.^{2} **B** 120 in.^{2}

   C 150 in.^{2} **D** 240 in.^{2}

GRIDDED ANSWER ⓪ ① ● ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

8. **DIMENSIONS** The floor of a rectangular room has an area of 204 square feet. The room is 5 feet longer than it is wide. What is the length (in feet) of the room? *TEKS A.10.A*

9. **PHYSICS** During an experiment in physics class, you drop a ball from a height of 100 feet. After how many seconds does the ball hit the ground? *TEKS A.10.A*