

Name _____

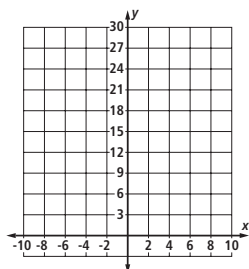
9-2B Lesson Master

Questions on SPUR Objectives

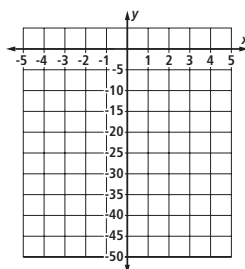
See pages 576–579 for objectives.

SKILLS Objective A

1. Solve $\frac{3}{4}x^2 = 27$ by using a graph.



2. Solve $-5x^2 = -45$ by graphing $y = -5x^2$ and $y = -45$.



3. Let $y = 2x^2 + 15$. Solve $-2x^2 + 15 = -17$ using the table. _____

x	-5	-4	-3	-2	-1	0	1	2	3	4
y	-35	-17	-3	7	13	15	13	7	-3	-17

4. Let $f(x) = 4(x - 1)^2$. Create a table of values to help you solve $4(x - 1)^2 = 16$. _____

x	-3	-2	-1	0	1	2	3	4
f(x)								

In 5–10, solve the equation. Give the exact answer(s).

5. $x^2 = 20$

6. $6a^2 = 72$

7. $b^2 - 235 = 165$

8. $12 - 7c^2 = -51$

9. $2(x - 9)^2 = 32$

10. $\frac{3}{5}(2d + 3)^2 = 15$

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9-2B

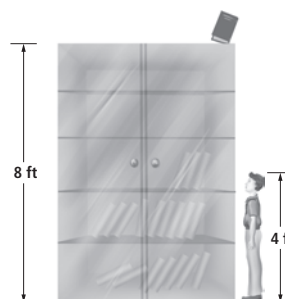
page 2

USES Objectives D and E

In 11-14, use the equation $d = 16t^2$ where $d =$ distance in feet, and $t =$ time in seconds. Approximate the answer to the nearest thousandth of a second.

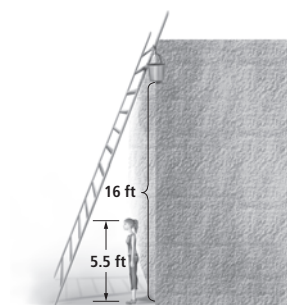
11. Emily drops a ball from a ledge in the loft of her home, which is 13 feet above the family room floor. How long will it take the ball to hit the floor? _____

12. A book falls off the top of an 8-foot shelf. Theodore is 4 feet tall. If it takes Theodore 2 seconds to respond to the fall and get out of the way, does the book hit him? Explain.



13. Cats are known to always land on their feet. A cat climbed to the top of a 30-foot tree. She lost her footing and fell to the ground. After how many seconds is she back on her feet? _____

14. Caitlyn bumped a ladder, which had a pail of paint sitting on it 16 feet from the ground. She is 5.5 feet tall. How many seconds does she have to react so the pail of paint doesn't land on her? Explain.



15. A 20-foot ladder is being used to clean windows that are 16 feet from the ground on Sean's house. How far from the base of the house should the ladder be placed so that the top of the ladder reaches the windows? _____

16. Cheryl has two square gardens. The length of the larger garden is 5 more than twice the length of the smaller garden. The area of the larger garden is 961 square feet.

a. What is the length of the smaller garden? _____

b. What is the area of the smaller garden? _____