

Name _____

1-7B Lesson Master**Questions on SPUR Objectives**

See Student Edition pages 66–69 for objectives.

SKILLS Objective D

- The relationship between watts, amps, and volts is given by the formula $w = \frac{a}{v}$.
 - Solve $w = \frac{a}{v}$ for a . _____
 - Solve $w = \frac{a}{v}$ for v . _____
- The formula for the distance d an object falls during time t when it is dropped near Earth's surface is $d = \frac{1}{2}gt^2$, where g is the gravitational constant.
 - What is the ratio of d to t^2 ? _____
 - Solve the formula for g . _____
- Solve for n in the equation $t^2 = 8 - 2n$. _____
- If d_1 and d_2 are the diagonals of a rhombus, the area is given by the formula $A = \frac{1}{2}d_1d_2$.
 - Solve this formula for d_1 . _____
 - In what type of rhombus does $d_1 = d_2$? _____
 - Use the original formula and your answer to Part b to write a formula for the area A of a square in terms of its diagonal, d .

SKILLS Objective FIn 5–8, use the CAS $\boxed{\text{ENTER}} \boxed{\text{X,T,}\theta,n} \boxed{\text{PRGM}} \boxed{\text{ALPHA}} \boxed{\text{DEL}}$ function to rewrite the expression.

- $6x(5x - 135) =$ _____
- $(4y)(12y - 8)(-8y - 3) =$ _____
- $-(7m - 22n + 16) =$ _____
- $(3x^2 + 1.6)(0.5x^2 - 3.5) =$ _____

In 9 and 10, use the CAS $\boxed{\text{SIN}} \boxed{\text{ON}} \boxed{\text{LOG}} \boxed{\text{VARS}} \boxed{\text{ENTER}}$ command to solve each equation.

- $14k + 35 = 105$ _____
- $9.6d - 44 = 3.2d + 40$ _____

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In 11 and 12, use the CAS `SIN|ON|LOG|VARS|ENTER` command to solve for x .

11. $-6(5x - 13) = 22$ _____ 12. $4x + 3y - z = 10$ _____

13. Use the CAS `SIN|ON|LOG|VARS|ENTER` command to solve $4x^2 + 9 = y$ for x . What does the display show?

14. The total area of two squares is 193 square feet. The length of the side of one square is 5 feet longer than that of the other square.

a. Set up an equation to represent the situation. _____

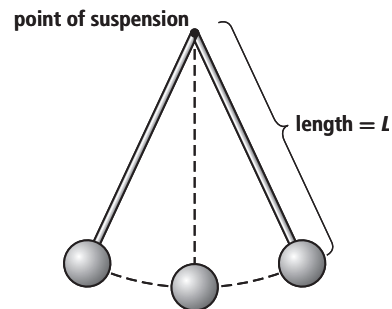
b. Use the CAS `SIN|ON|LOG|VARS|ENTER` command to solve your equation. _____

c. You should have gotten two answers in Part b. Determine which (if either) solution fits the situation.

PROPERTIES Objective I

15. The formula for the volume of a cylinder is $V = \pi r^2 h$. Rewrite this formula for a cylinder whose height is half its radius.

16. **Multiple Choice** A simple pendulum is pictured at the right. The time T it takes the pendulum to complete one full swing is approximated by the formula $T = 2\pi\sqrt{\frac{L}{g}}$ where L is the length, and g is the gravitational constant. Which, if any, of these equations are equivalent to the given formula?



- | | |
|---|-----------------------------|
| A $\frac{T}{2\pi} = \sqrt{\frac{L}{g}}$ | B $g = 4\pi\frac{L}{T}$ |
| C $2\pi g = \frac{\sqrt{L}}{T}$ | D $L = \frac{gT^2}{4\pi^2}$ |