Name _____

1-7A Lesson Master

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Questions on SPUR Objectives
See Student Edition pages 66–69 for objectives.

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SKILLS Objective D

1. Density is defined as mass divided by volume, or $D = \frac{m}{v}$.

  a. Solve $D = \frac{m}{v}$ for m. _____   **b.** Solve $D = \frac{m}{v}$ for V. _____

2. The simple interest formula is $B = P + Prt$ where P is the principal (the amount borrowed), r is the interest rate, t is the time, and B is the total amount repaid.

  a. Solve the formula for t. _____   **b.** Solve the formula for P. _____

SKILLS Objective F

In 3 and 4, use the CAS `ENTER` `X,T,Θ,n` `PRGM` `ALPHA` `DEL` **function to rewrite the expression.**

3. $-(2x + 5y - 7) =$ _____   **4.** $(12 - 2a)(20 - 2a)(a) =$ _____

5. In a right triangle, one leg is 3 inches longer than the other leg. The hypotenuse is 15 inches long.

  a. Set up an equation using the Pythagorean Theorem.   _____

  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) is a solution to the problem.   _____

PROPERTIES Objective I

6. The formula for the volume of a cone is $V = \frac{1}{3}\pi r^2 h$. Rewrite this formula for a cone whose height is twice its radius.   _____

7. **Multiple Choice** If an object is moving in a circular path, the centripetal force F on the object is given by $F = \frac{mv^2}{r}$, where m is the mass of the object, v is the object's velocity, and r is the radius of the circular path. Which, if any, of these equations are equivalent to the given formula?

_____

A $Fm = rv^2$ B $\frac{F}{m} = \frac{v^2}{r}$ C $v = \sqrt{\frac{Fr}{m}}$ D $\frac{F}{r} = \frac{m}{v^2}$