Name

2-2A Lesson Master

Questions on SPUR Objectives
See Student Edition pages 143–147 for objectives.

SKILLS Objective A

In 1 and 2, write a variation equation representing the situation.

1. y varies inversely as the square of x. _____

2. The size s of each piece of pie is inversely proportional to the number n of people who are sharing the pie equally. _____

3. **Fill in the Blanks** If $c = \frac{3}{4b^2}$, then _____ varies inversely as the _____ power of _____. The constant of variation is _____.

SKILLS Objective B

4. Suppose y varies inversely as x and y is 12 when x is 5. Find y when x is 3. _____

5. Suppose t is inversely proportional to the cube of s, and $t = 18.2$ when $s = 120$. Find the constant of variation. _____

6. Suppose N varies inversely as the square of d, and $N = 100$ when $d = 5$. Find N when d is 7.5. _____

USES Objective F

In 7–10, determine whether the two variables represent a *direct variation*, *inverse variation*, or *neither*.

7. The intensity of light and the distance from the light source. _____

8. The number of fans at a football game and the score of the game. _____

9. The area of a pizza and its diameter. _____

10. The time it takes to walk to your friend's house and your speed. _____

USES Objective G

11. The number of square tiles it takes to cover a floor varies inversely as the square of the length of a side of the tile. If it takes 140 12-inch tiles to cover a kitchen floor, how many 6-inch tiles will it take? _____

12. The number of pieces of spherical fruit that you can pack in a box varies inversely as the cube of the diameter of each piece. If you can fit 106 oranges (3" diameter) in a certain box, how many grapefruit (5" diameter) can you fit in the same box? _____