WS #24

Solve. Assume y varies <u>inversely</u> as x. (Inverse Variation: xy = constant)

1.	If $x = 4$ when $y = 5$,
	find x when $y = 2$.

2. If
$$y = 8$$
 when $x = -7$, find y when $x = 4$.

3. If
$$x = \frac{1}{3}$$
 when $y = 12$, find y when $x = 8$.

4. If
$$x = \frac{1}{4}$$
 when $y = \frac{4}{5}$, find x when $y = \frac{3}{10}$.

5. If
$$x = \frac{1}{3}$$
 when $y = 60$, find y when $x = 40$.

6. If y = 4.8 when x = 0.4, find y when x = 3.6.

7. The amount of time necessary to make a trip varies inversely as the rate or travel. At 40 miles per hour it takes Jenny 5 hours to reach her destination. How long would it take if she drove at 50 miles per hour?	8. The time required to do a job varies inversely as the number of workers. If it takes 3 men 4 days to paint a house, how long will it take 2 men working at the same rate to paint the same house?
9. The speed of a gear varies inversely as the number of teeth. If a gear with 42 teeth makes 18 revolution per minute, how many revolutions per minute will be made by a gear with 28 teeth?	10. The rent for a hotel room varies inversely as the number of people sharing the cost. Four people sharing a room each pay \$45 per night. How much would each pay if 3 people shared the room?