

Math 100 Exercises

1. In a study of the relationship between the rate of a person's speech (S) in words per second and his/her memory span (M) in the average number of words recalled from a list, psychologists found the following data.

| S | M |
|---|-----|
| 2 | 2.3 |
| 4 | 5.3 |
| 6 | 8.3 |

- a. Assume the relationship between memory span and rate of speech is linear, write an equation that may be used to predict one's memory span given his/her rate of speech.
- b. What memory span (M) would you predict for a person who speaks at 5 words per second?
- c. If you were interested in the rate of speech as predicted by the memory span, what equation would calculate S when given M?
2. Skill Builders
- a. Solve for t: $s = 5t + 11$
- b. Solve for x: $y = 0.9x - 15$
- c. Simplify: $5(-3 + 2x) - 2(3x - 5)$
- d. Simplify: $3(2x + 4y) + 5(x - y)$
- e. Simplify: $\frac{-2x}{3} + \frac{x}{2} - \frac{(2x-4)}{6}$
- f. Solve for W: $3Z + 9W = 4(Z - W)$