

Name

MAT 101

Date

QUIZ

CHAPTER 7.1-Linear Equations

Directions: Make sure to answer each problem completely and show work.

1. Solve each equation

a. $8 - 8x = 16$

b. $7x - 5x = x + 8$

c. $4(x - 2) + 2(x + 3) = 6$

d. $6x - 4(3 - 2x) = 5(x - 4) - 10$

e. $-3x + 6 - 5(x - 1) = (2x - 4) - 5x + 5$

$$\text{f. } \frac{3x}{4} + \frac{5x}{2} = 13$$

$$\text{g. } \frac{x-8}{5} + \frac{8}{5} = -\frac{x}{3}$$

h. $\frac{3x+7}{6} + \frac{x+7}{6} = \frac{x+6}{4}$

i. $0.05x + 0.12(x + 5000) = 940$

j. $0.05x + 0.10(200 - x) = 0.45x$

2. Solve each formula for the specified variable.

a. $d = rt$; solve for t

b. $A = \frac{1}{2}bh$; solve for b

c. $V = \frac{1}{3}\pi r^2 h$; solve for h

d. $F = \frac{9}{5}C + 32$; solve for C

e. $S = 2\pi r^2 + 2\pi rl$; solve for l