

MATH 05

Test 1 Review Problems  
Chapter 1 and Chapter 2

1. Determine whether 2 is a solution of the equation  $4x - 3 = 7$ .

2. Determine whether 2 is a solution of the equation  $2(2x - 3) = 6x - 11$ .

3. Solve each equation and check your results.

(a)  $2 - 3x = 11$

(b)  $2x - 5 = x + 3$

(c)  $-57x - 44 = 7(-9x - 5) + 6x - 9$

(d)  $7(-5x - 7) - 2x + 6 = -37x - 41$

(f)  $-8x + (-13)x + 19 = 25 + 12$

(g)  $8x - 16 = -(13x + 19)$

(h)  $-\frac{9}{4}x - \frac{9}{4} = -1$

(i)  $\frac{2x}{5} - \frac{x}{3} = \frac{7}{5}$

4. Solve each literal equation for given variable.

(a)  $5x - 9y = 23$  solve for  $y$

(b)  $\frac{t}{w} = 4b - z$  solve for  $b$

5. Solve each linear inequality, give the answer in both, *set-builder* and *interval notations*, and graph the solution sets.

(a)  $2x + 7 \leq 25$

(b)  $3x + 5 < 5x - 19$

(c)  $3 - 3(2 + x) \leq 3x + 45$

(d)  $\frac{3}{7}x + 6 \geq -\frac{12}{7}x - 9$

6. Solve each compound linear inequality, give the answer in both, *set-builder* and *interval notations*, and graph the solution sets.

(a)  $-5 < 2x + 7 < 12$

(b)  $7x - 36 < 3x < 7x - 28$

(c)  $3 - x \geq 2$  or  $x - 5 \geq 6$

(d)  $2(x - 7) + 4 < 5x - 1$  or  $\frac{x}{10} \leq -2$