

Practice: Do at least three parts from each question.

2. State the slope y-intercept form of the equation of the line with the given slope  $m$  and y-intercept  $b$ .

(a)  $m = 2$ ;  $b = 3$       (b)  $m = -4$ ;  $b = 5$

(c)  $m = 5$ ;  $b = -3$       (d)  $m = \frac{1}{2}$ ;  $b = -7$

3. State the slope and y-intercept of each of the following.

(a)  $y = 3x - 7$       (b)  $y = -\frac{1}{2}x + 5$

(c)  $y = -5x - 4$       (d)  $y = 7x$

(e)  $y = \frac{2x - 1}{3}$       (f)  $y + 7 = 2x$

(g)  $y + 3x = 4$       (h)  $2x - 3 = y$

(i)  $5x + y - 2 = 0$       (j)  $7x = 3 + y$

(k)  $4x - y = 5$       (l)  $3x + 2y = 5$

(m)  $x + 3y = -2$       (n)  $6x - y - 4 = 0$

7. Determine an equation of the line through the given point and having the given slope. Express the equation in the form  $y = mx + b$  and determine two other points on the line.

(a)  $(1, 2)$ ;  $m = 3$       (b)  $(-1, -1)$ ;  $m = -2$

(c)  $(3, 0)$ ;  $m = 2$       (d)  $(4, -2)$ ;  $m = -0.5$

(e)  $(0, -3)$ ;  $m = \frac{1}{2}$       (f)  $(-5, -6)$ ;  $m = 0$

(g)  $(-3, 4)$ ;  $m = \frac{3}{4}$       (h)  $(10, 20)$ ;  $m = 0.2$

## Substitution Sequence

### Round 1

1.  $y=3x+3$   
 $y=2x+5$

2.  $y=5x-6$   
 $y=4x+2$

3.  $y=2x-6$   
 $y=x+1$

4.  $y=5x-2$   
 $y=3x+4$

5.  $y=6x-8$   
 $y=3x+4$

6.  $y=3x-5$   
 $y=-2x+10$

7.  $y=-2x+4$   
 $y=-4x+6$

8.  $y=3x-2$   
 $y=x+2$

9.  $y=-3x+6$   
 $y=2x-2$

10.  $y=3x+4$   
 $y=3x-3$

### Round 2

1.  $y=x+4$   
 $x+y=6$

2.  $y=2x-1$   
 $2x+y=3$

3.  $y=3x+2$   
 $2x+y=12$

4.  $y=x+4$   
 $x+2y=20$

5.  $y=x+3$   
 $3x-2y=-7$

6.  $y=2x-1$   
 $3x-y=5$

7.  $y=\frac{1}{2}x-3$   
 $3x-2y=-6$

8.  $y=2x-4$   
 $2x-y=10$