Review B   Name_____
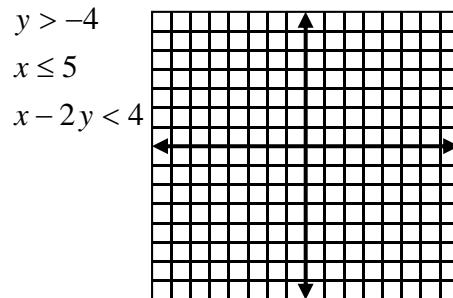
CAHSEE wk 9 Wed

12. Describe the transformation from $f(x) = x^2$ to:

1. 45,41,37,33,... Find a_{70}

a) $g(x) = -3x^2$

2. 3+6+9+12+...+432

b) $h(x) = \dfrac{2}{5}(x-3)^2$

3. In an arithmetic sequence
    $a_6 = -5; a_{13} = 44;$ find S_{25}

c) $j(x) = (-x+7)^2 + 5$

4. Using (-2,7) and (6,-3) write the
    equation of the line in :
    a) point-slope form
    b) slope-intercept form
    c) standard form

13. Graph the system of inequalities

$y > -4$

$x \le 5$

$x - 2y < 4$

5. Write the equation of the line in
    slope-intercept form perpendicular
    to 4x-5y=9 passing through (2,7)

6. Solve:

a) $|2x-3| = 7$

b) $4 < |x+1|$

c) $|x-3| + 7 \le 5$

14. Simplify:

a) $\left(\dfrac{-4x^5 y^{-6}}{3x^2 y^2} \right)^3$

7. Find the inverse of $f(x) = \dfrac{1}{3}x + 2$

b) $\left(\dfrac{-2a^{-9} c^6}{3a^{-6} c^{-9}} \right)^{-2}$

8. Solve: $\begin{array}{l} 7x - 3y = 12 \\ 2x + 4y = -5 \end{array}$

c) $(-2a^7 c^{-4})(5a^3 c)^2$

9. Evaluate
    Using 2
    column
    method.
    $\begin{vmatrix} 3 & 2 & 9 \\ 1 & 3 & 1 \\ -2 & 1 & 4 \end{vmatrix}$

15. y varies directly as x. If y= - 4 when
    x=7,
    find the constant of variation, k, and
    the direct variation equation.

10. **Solve for x** using Cramer's rule
    $3x - 2y + z = 5$
    $x - y + 9z = -2$
    $4x + 2y - 3z = 7$

16. State the property
    a) 2(3x-y)=6x-2y
    b) 3+(9+5)=3+(5+9)
    c) −2+2=0

11. Solve using elimination
    $4y = 3x - 6$
    $x = 2y + 5$

Answers:

1. $a_{70} = -231$

2. 31,320

3. 1100

4. a) $y + 3 = \frac{-5}{4}(x - 6)$ or
   $y - 7 = \frac{-5}{4}(x + 2)$

b) $y = \frac{-5}{4}x + \frac{9}{2}$

c) 5x+4y=18

5. $y = \frac{-5}{4}x + \frac{19}{2}$

6. a) x=5 or x= -2
b) x>3 or x<-5
c) no solution

7. $f^{-1}(x) = 3x - 6$

8. $\left(\frac{33}{34}, \frac{-59}{34}\right)$

9. -28

10. $\frac{186}{117}$

11. (-4,-4.5)

12. a) reflect across x-axis, vertical stretch factor 3
b) vertical compression factor 2/5, horizontal translation 3 right.
c) reflect across y-axis, horizontal translation 7 left, vertical translation 5 up

13.

14. a) $\frac{-64x^9}{27y^{24}}$ b) $\frac{9a^6}{4c^{30}}$ c) $\frac{-50a^{13}}{c^2}$

15. k=-4/7, y=(-4/7)x

16. a) Distributive prop
b) Commutative prop of addition
c) Additive inverse prop addition