Solve:

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

2) $-2 = \frac{13}{4y+1}$

3) $\frac{3}{7-x} = \frac{5}{x+1}$
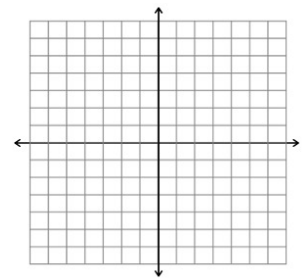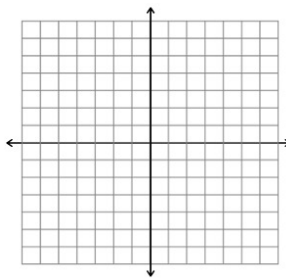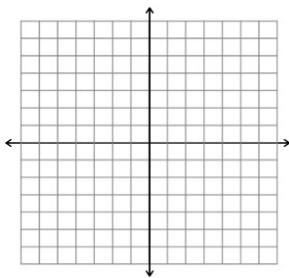
4) $4x^2 = 100$

Graph:

5) $y = 3x - 1 \; if \; x > -2$

6) $x = -3$
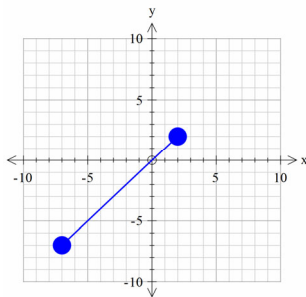
7) $y = -x - 4$

D:

R:

State the Domain and range in both set and interval notation

8)

D:

R:

Solve the following systems:

9) $y = 3x - 2$
    $y = -x - 6$

10) $2x - 3y = -2$
     $4x + y = 24$

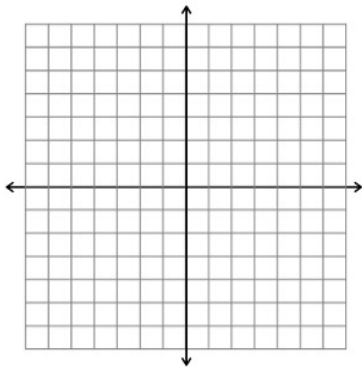11) $7x + 2y = 16$
     $-21x - 6y = 24$

12)
$$5x - 3 = 7$$
$$3x + 5y - 4z = -13$$
$$x - 3y + 5z = 16$$

13)   Christina has seven bills in her wallet, and they are either fives or tens. The total value of the bills is $55. How many of each type of bill does she have?

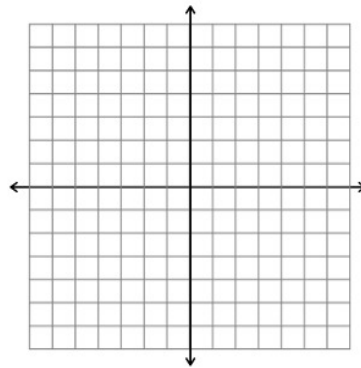Graph the following and state the Domain and Range in both set and interval notation
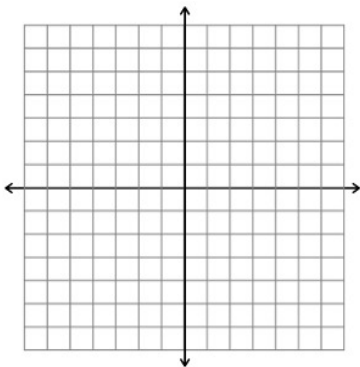
14) $g(x) = -2|x - 1| + 5$

15) $y = \frac{1}{3}(x + 4) + 2$
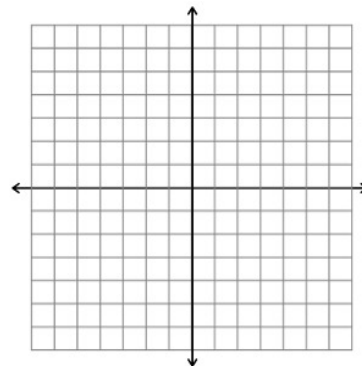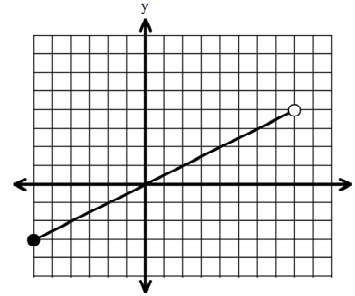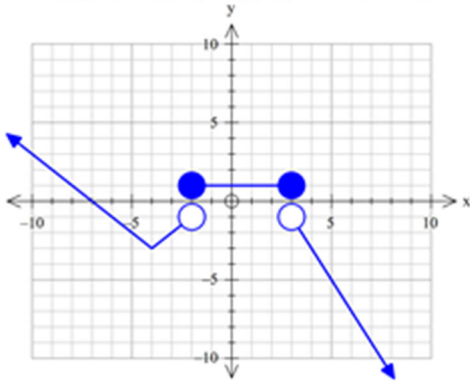
D:

D:

R:

R:

16) $h(x) = 3(x - 2) - 5$

17)   Graph the piecewise function:

$$y = \begin{cases} -\frac{1}{4}x - 2 & \text{if } x \leq -4 \\ 3 & \text{if } -4 < x < 3 \\ |x - 4| & \text{if } x \geq 3 \end{cases}$$

D:

R:

18) Write the equations of the piecewise function   19) State the D & R in both interval and set notation:

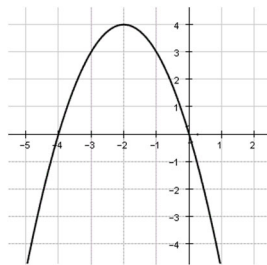

D:

R:

20) What is the range of the function shown?

a) $(-\infty, 4]$
b) $[4, \infty)$
c) $(-\infty, -2]$
d) $[-2, \infty)$
e) $(-\infty, \infty)$

21) The function $y = x$ is transformed with a horizontal shift to the right 3 units, a vertical reflection, and a vertical stretch by a factor of 2. Which of the following shows the new equation of the function?

A) $y = 2(x + 3) - 1$
B) $y = -2x + 3$
C) $y = -(x - 3) + 2$
D) $y = -2(x - 3)$

22) Solve: $-\dfrac{5}{6}x + 3 = -9$

23) Graph the piecewise function:

$$h(x) = \begin{cases} |x + 4| - 3 & \text{if } x < -2 \\ 1 & \text{if } -2 \le x \le 3 \\ -2x + 5 & \text{if } x > 3 \end{cases}$$