

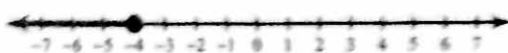
4th 6 Weeks Review 2015

Draw a graph for each inequality.

1) $2 \leq n$



2) $x \leq -4$



3) $a > -5$

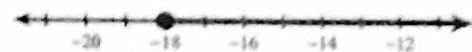


4) $-3 \leq x$



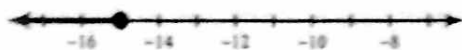
Solve each inequality and graph its solution.

5) $36 \geq -2n$



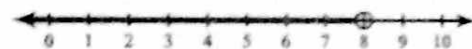
$n \geq -18$

6) $-23 \geq n - 8$



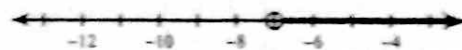
$n \leq -15$

7) $2 > \frac{x}{4}$



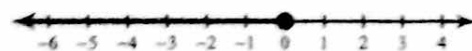
$x < 8$

8) $m - 11 > -18$



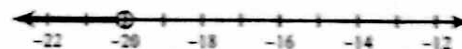
$m > -7$

9) $6 \geq \frac{n}{6} + 6$



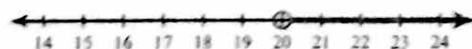
$n \leq 0$

10) $-88 > -8 + 4x$



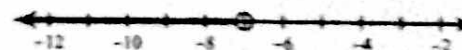
$x < -20$

11) $166 < 8n + 6$



$n > 20$

12) $24 < 3 - 3n$



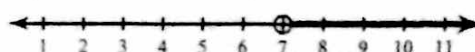
$n < -7$

$$13) 139 < -6x + 5(7x - 7)$$



$$x > 6$$

$$14) -2x + 6(1 - 3x) < -134$$



$$x > 7$$

$$15) -190 < -5(5a + 3)$$



$$a < 7$$

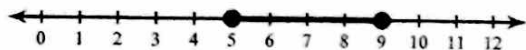
$$16) -3x - 7(x - 1) > 87$$



$$x < -8$$

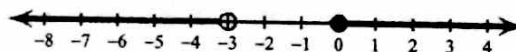
Solve each compound inequality and graph its solution.

$$17) 2x - 8 \geq 2 \text{ and } -2 - 6x \geq -56$$



$$5 \leq x \leq 9$$

$$18) -a + 1 \leq 1 \text{ or } 3a - 7 < -16$$



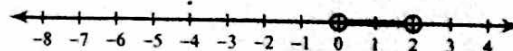
$$a \geq 0 \text{ or } a < -3$$

$$19) -3 + 6a \geq 39 \text{ or } 2a - 10 < 2$$



$$a \geq 7 \text{ or } a < 6$$

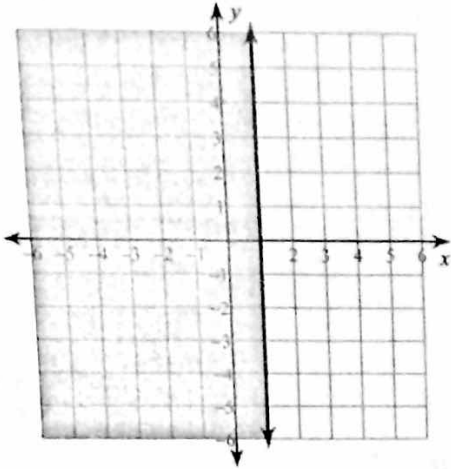
$$20) 2 + 9a < 20 \text{ and } 2 - 5a < 2$$



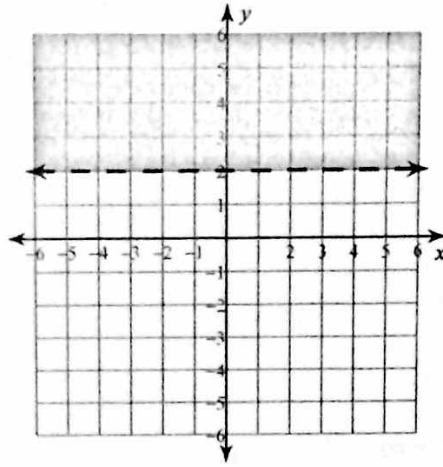
$$0 < a < 2$$

Sketch the graph of each linear inequality.

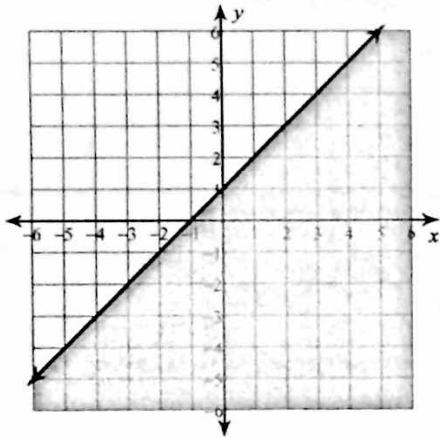
21) $x \leq 1$



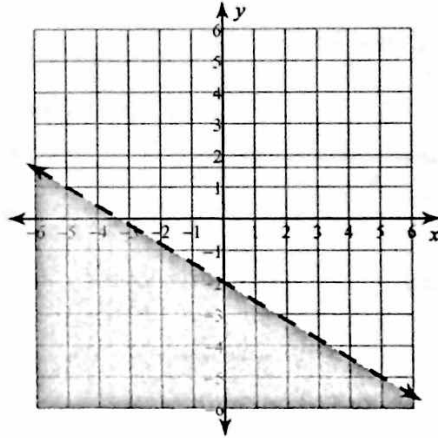
22) $y > 2$



23) $x - y \geq -1$



24) $3x + 5y < -10$



Simplify each expression.

25) $(5x - 3x^2) - (x^2 - 5x)$
 $-4x^2 + 10x$

26) $(13a^5 + 7a^4 + 2a^3) + (-10a^2 - 14a^3 - 5a^4)$
 $13a^5 + 2a^4 - 12a^3 - 10a^2$

27) $(-3k^4 - 12k^2 - 7k^5) - (-9k^2 - 11k + k^5)$
 $-8k^5 - 3k^4 - 3k^2 + 11k$

$$28) (-11x + 5x^2) - (y^4 - 9xy^4 - 14x) + (-4y^4 - 8x)$$
$$9xy^4 - 5y^4 + 5x^2 - 5x$$

Find each product.

$$29) (4v - 1)(5v + 8)$$
$$20v^2 + 27v - 8$$

$$30) (2k - 6)(2k - 3)$$
$$4k^2 - 18k + 18$$

$$31) -8n(8n^2 + 7n + 6)$$
$$-64n^3 - 56n^2 - 48n$$

$$32) -6n^2(-6n^2 + n - 5)$$
$$36n^4 - 6n^3 + 30n^2$$

$$33) (-2n - 5)(-3n^2 - 3n - 6)$$
$$6n^3 + 21n^2 + 27n + 30$$

$$34) (-v + 1)(-6v^2 - 3v - 1)$$
$$6v^3 - 3v^2 - 2v - 1$$

$$35) (6r - 7)^2$$
$$36r^2 - 84r + 49$$

$$36) (5b - 4)^2$$
$$25b^2 - 40b + 16$$

- 37) A computer company is buying desktops and laptops for their company. Each desktop cost \$780 and each laptop cost \$550. The company cannot spend more than \$14,000.

a.) Write an inequality for this word problem.

b.) If the company buys 9 desktops, how many laptops can they buy?