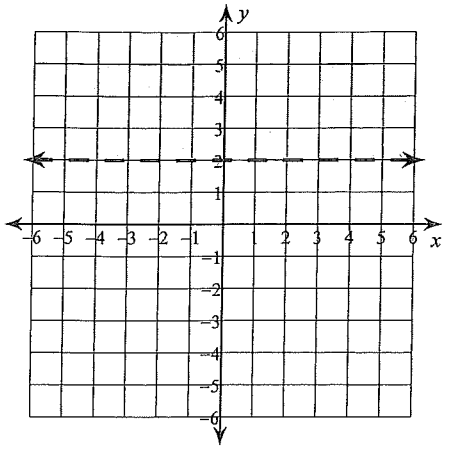
Algebra 1 Name_____ ID: 2

Lesson 12.1- Exponents

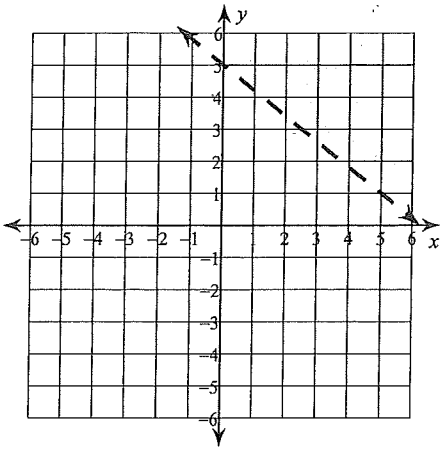
Date_____ Period____

Sketch the graph of each linear inequality.

1) $y > 2$



2) $4x + 5y > 25$



Solve each system by elimination.

3) $-5x - 4y = -5$
$5x - 6y = 5$

$(1, 0)$

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

$(1, -1)$

5) $x + 9y = 18$
$-3x + 3y = 6$

$(0, 2)$

6) $3x + 6y = -9$
$10x - 5y = -5$

$(-1, -1)$

Solve each system by substitution.

7) $-4x + 2y = 22$
$y = 3x + 13$

$(-2, 7)$

8) $-x - 3y = 19$
$y = x + 3$

$(-7, -4)$

Simplify. Your answer should contain only positive exponents.

9) $b^4 \cdot b^2 \cdot 4b^4$

$4b^{10}$

10) $3x \cdot 3x$

$9x^2$

11) $v^4 \cdot v \cdot 3v$

$3v^6$

12) $2p^2 \cdot 3p$

$6p^3$

13) $2k^4 \cdot 3k^3$

$6k^7$

14) $x \cdot 2x^3 \cdot x^2$

$2x^6$

15) $x^3 \cdot 3x$

$3x^4$

16) $p^4 \cdot 4p^3$

$4p^7$

17) $2x^2y^4 \cdot 3yx^3$

$6x^5y^5$

18) $2mn^2 \cdot 2m^4n^2$

$4m^5n^4$

19) $3yx^4 \cdot 3x^2y^3$

$9y^4x^6$

20) $3n \cdot n$

$3n^2$

21) $4m^3n^3 \cdot 2n^3 \cdot mn^4$

$8m^4n^{10}$

22) $nm^3 \cdot 3nm^3$

$3n^2m^6$

23) $x^2y^4 \cdot 3x^2y^3$

$3x^4y^7$

24) $3ab^2 \cdot 2ba^3$

$6a^4b^3$

25) $2x^3y^3 \cdot -x^2$

$-2x^5y^3$

26) $-2b^4 \cdot a^3$

$-2b^4a^3$

27) $2x^4y^4 \cdot -4xy^4$

$-8x^5y^8$

28) $-3x^3y^2 \cdot 2yx^2$

$-6x^5y^3$