Placement Review Packet Name_____ ID: 1

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Show all your work. No calculators are allowed.

Evaluate each using the values given.

1) $q + m^2 + 6$; use $m = 1$, and $q = -1$

2) $a + ba + c$; use $a = 4$, $b = -5$, and $c = -6$

3) $(-2x)(z - y)$; use $x = -5$, $y = 5$, and $z = 1$

4) $qr - (q + r)$; use $q = 4$, and $r = 5$

Evaluate each expression.

5) $(5 + 3 + 5) \times 2^2$

6) $18 \div (3(4 - 2)) + 3$

7) $(-3 - 6) \div (-4 + -2 + 1 + 2)$

8) $-6 - (-4)^2 + 4(3 + 1)$

9) $1\frac{1}{3} - \left(-1\frac{5}{8}\right)$

10) $\left(-3\frac{1}{2}\right) + \left(-3\frac{1}{2}\right)$

Find each product.

11) $(4)(-1)(-10)(7)$

12) $(3)(-5)(8)(-8)$

13) $\left(-\frac{7}{5}\right)\left(\frac{1}{8}\right)$

14) $\left(-\frac{3}{2}\right)\left(\frac{4}{3}\right)$

15) $(n + 2)(7n - 4)$

16) $(7p - 1)(7p - 4)$

17) $(4b + 6)(2b^2 - 5b + 6)$

18) $(7b + 2)(b^2 - 6b - 2)$

Find each quotient.

19) $-1\frac{1}{2} \div 1\frac{1}{2}$

20) $\frac{1}{2} \div \frac{-2}{3}$

Simplify each expression.

21) $5(-m + 10) + 2m$

22) $8(3 + 10x) - 10x$

23) $(8a^2 + 5a^4) - (3a^2 - 6a^3 - 8a^4)$

24) $(8m^3 + 4) - (4m^4 - m^3 - 1)$

Solve each equation.

25) $6 = 15 + b$

26) $\frac{b}{6} = -2$

27) $-2(-7 + k) = -8$

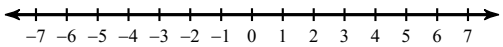
28) $42 = 6 - 3m$

29) $6 + 6b = 3 + 3(1 - 6b)$

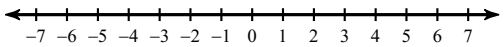
30) $-2(n + 4) = -40 - 6n$

Draw a graph for each inequality.

31) $p > -4$



32) $r > 0$



Write an inequality for each graph.

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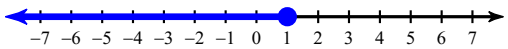

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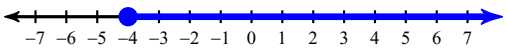

Solve each proportion.

35) $\frac{b}{3} = \frac{4}{9}$

36) $\frac{5}{10} = \frac{2}{x}$

37) $\frac{2}{5} = \frac{a - 7}{a - 6}$

38) $\frac{8}{9} = \frac{k - 9}{k - 6}$

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Solve each problem.

39) 71 is what percent of 88?

40) 154.5 is 330% of what?

41) 125 is 5% of what?

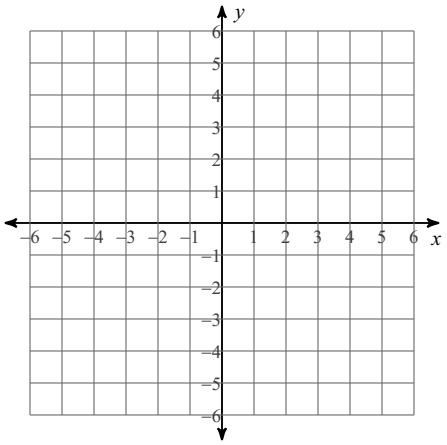
Find the slope of the line through each pair of points.

42) $(-13, -3), (11, 3)$

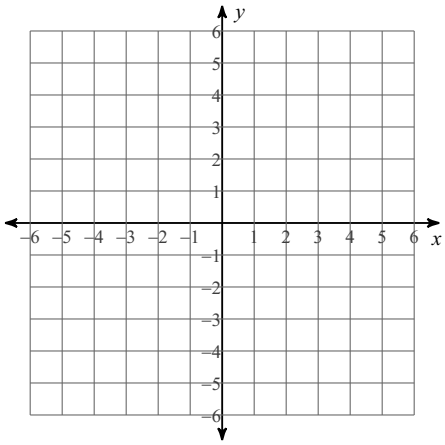
43) $(13, 11), (2, 4)$

Sketch the graph of each line.

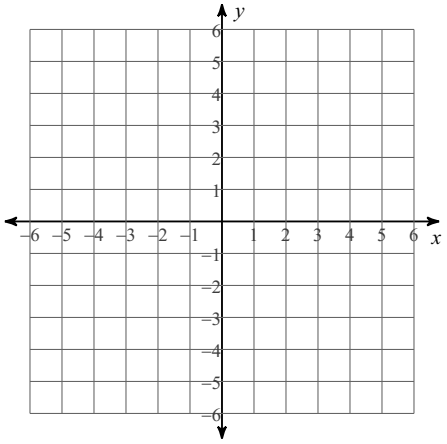
44) x-intercept = –2, y-intercept = 3



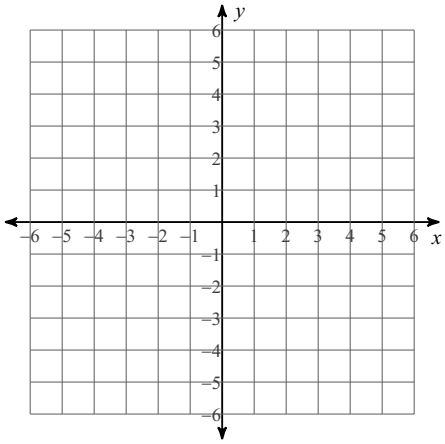
45) x-intercept = –4, y-intercept = 1



46) $y = 5x + 5$



47) $y = \frac{1}{5}x + 1$



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Write the slope-intercept form of the equation of each line.

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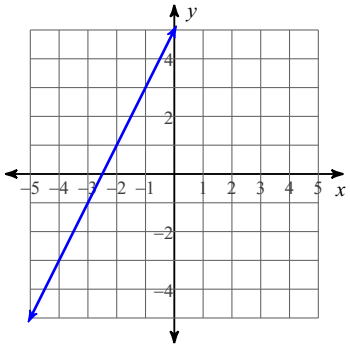

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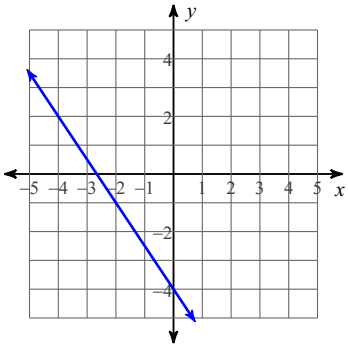

Simplify. Your answer should contain only positive exponents.

50) $x^3 \cdot 3x^3 \cdot 4x^4$

51) $3x^2 \cdot 3x^3$

Write each number in scientific notation.

52) 90000

53) 0.124

Write each as an algebraic expression.

54) the sum of m and 5

55) the difference of v and 22

Solve the following problems:

56) Mr. Cruz pays for 6 crates of strawberries with a $100 bill. He receives $22 back. How much money each item was?

57) Julie receives a monthly salary of $3000. At the end of the year she receives a $800 bonus. Her total expenses that year are $32,450. How much money does she have left at the end of the year?

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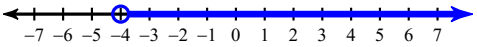
Answers to Show all your work. No calculators are allowed. (ID: 1)

1) 6
2) -22
3) -40
4) 11
5) 52
6) 6
7) 3
8) -6
9) $\frac{71}{24}$
10) -7
11) 280
12) 960
13) $-\frac{7}{40}$
14) -2
15) $7n^2 + 10n - 8$
16) $49p^2 - 35p + 4$
17) $8b^3 - 8b^2 - 6b + 36$
18) $7b^3 - 40b^2 - 26b - 4$
19) -1
20) $-\frac{3}{4}$
21) $-3m + 50$
22) $24 + 70x$
23) $13a^4 + 6a^3 + 5a^2$
24) $-4m^4 + 9m^3 + 5$
25) $\{-9\}$
26) $\{-12\}$
27) $\{11\}$
28) $\{-12\}$
29) $\{0\}$
30) $\{-8\}$
31)


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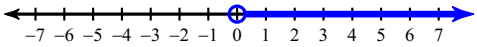
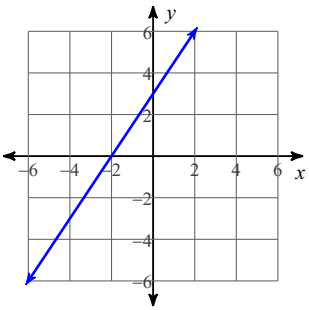


33) $v \le 1$
34) $n \ge -4$
35) $\{1.33\}$
36) $\{4\}$
37) $\{7.67\}$
38) $\{33\}$
39) 80.7%
40) 46.8
41) 2500
42) $\frac{1}{4}$
43) $\frac{7}{11}$
44)


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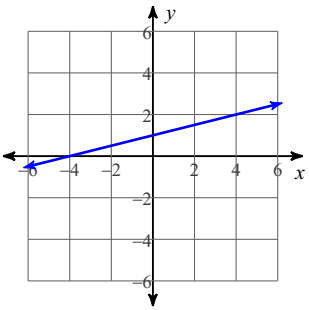

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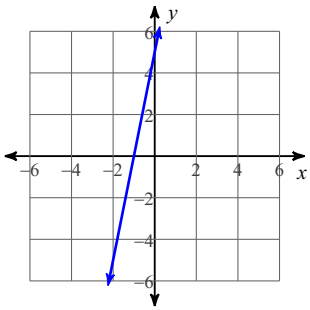

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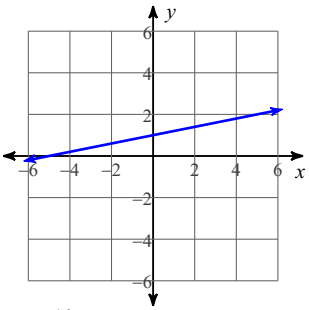

48) $y = 2x + 5$
49) $y = -\frac{3}{2}x - 4$
50) $12x^{10}$
51) $9x^5$
52) 9×10^4
53) 1.24×10^{-1}
54) $m + 5$
55) $v - 22$
56) 13
57) $\$4350$

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