

Name _____

Identify the number as prime, composite, or neither.

1) 150

2) 41

Write the fraction in lowest terms.

3) $\frac{105}{217}$

4) $\frac{14}{28}$

Perform the operation. Write the answer as a fraction in lowest terms.

5) $\frac{11}{24} \cdot \frac{30}{22}$

6) $9 \cdot 1\frac{9}{14}$

7) $\frac{4}{11} \div \frac{3}{5}$

8) $3\frac{7}{12} \div 6\frac{5}{9}$

9) $4\frac{3}{7} + 13\frac{2}{5}$

10) $\frac{7}{8} + \frac{5}{12}$

11) $\frac{19}{20} - \frac{9}{10}$

12) $3\frac{1}{4} - 3\frac{1}{7}$

Solve the equation.

13) $-\frac{9}{10}x = -81$

14) $-2p + 7 = 5 - (5p + 2)$

15) $3 - (x - 5) = -5x + 4(x + 9)$

16) $12(x + 4) = 4(3x + 3) + 36$

17) $\frac{12}{13}x + \frac{1}{3} = \frac{2}{5} - \frac{1}{13}x + \frac{2}{5}$

Solve the problem.

18) A minor league baseball team plays 82 games in a season. If the team won 16 more than twice as many as they lost, how many wins and losses did the team have?

19) Find the measure of an angle, if its complement measures 30° less than four times the angle.

20) Find the measure of an angle, if its supplement measures 35° more than six times the angle.

21) An electrician cuts a 14 ft piece of wire into two pieces. One piece is 2 ft longer than the other. How long are the pieces?

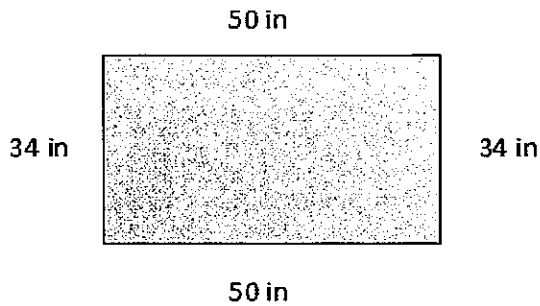
22) At work one day, Erica Franz received 36 packages. Speedy Delivery delivered three times as many as Ralph's Express, while Ralph's Express delivered four more than SendQuick Package Service. How many packages did each service deliver to Erica?

23) A Special Olympics event has 12 more boys than girls competing. The total number of participants is 1000. How many boys competed and how many girls competed?

24) How much pure acid is in 250mL of a 14% acid solution?

25) If 8 US dollars can be exchanged for 84.3 Mexican pesos, how many pesos can be obtained for \$65? (Round your answer to the nearest tenth)

26) The newspaper, The Constellation, printed in 1859, had width 34 in and length 50 in. What was the perimeter? What was the area?



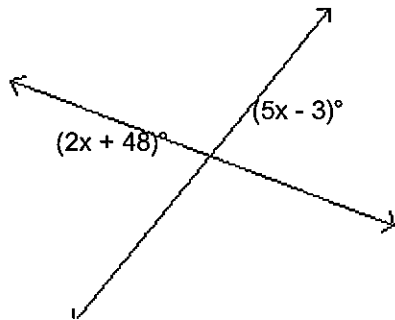
Solve the proportion.

27) $\frac{x}{7} = \frac{24}{28}$

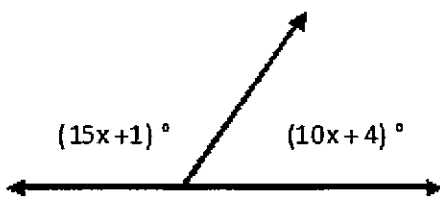
28) $\frac{x+6}{3} = \frac{x+8}{6}$

Solve the problem.

29) Find the measure of each marked angle.

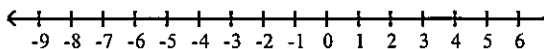


30) Find the measure of each marked angle.

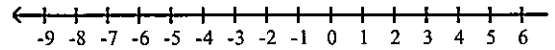


Solve the inequality and graph the solution set.

31) $-10x + 4(x - 2) \geq 2x - (5 + 5x) - 12$



32) $4 < 2t - 4 \leq 12$



Decide whether or not the ordered pair is a solution to the equation.

33) $13x + 6y = -44$; $(-2, -3)$

34) $y = 5x$; $(-2, -10)$

35) $x - y = 9$; $(3, 6)$

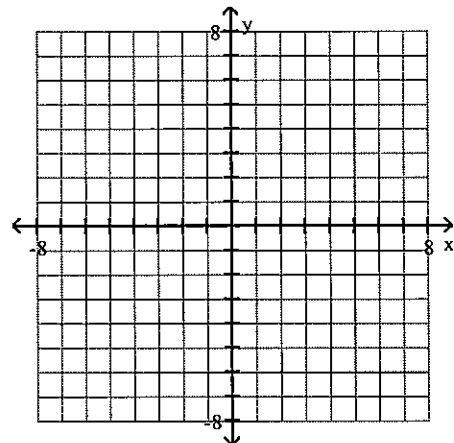
Complete the ordered pair for the given equation.

36) $y = -4x - 18$ $(-6, \quad)$

37) $4x + y = -19$ $(\quad, -19)$

Plot the ordered pairs on the rectangular coordinate system provided.

38) $A(3, 3)$, $B(-4, 2)$



Complete the table of values for the given equation.

39) $y = -x + 5$

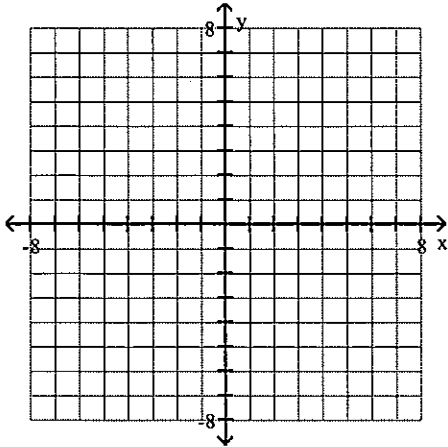
x	0	2	5
y			

40) $4x - 2y = -8$

x			
y	4	0	8

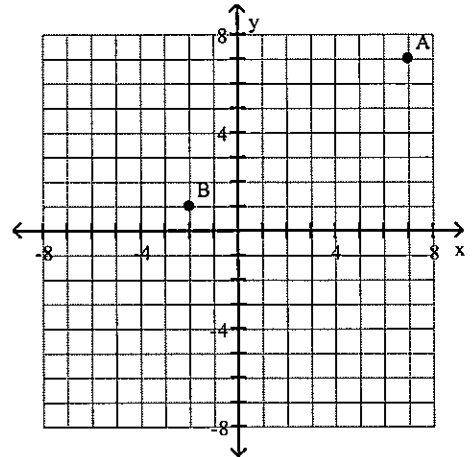
Plot the ordered pairs on the rectangular coordinate system provided.

41) A(5, 2), B(2, -5)



Give the ordered pairs for the points labeled on the graph.

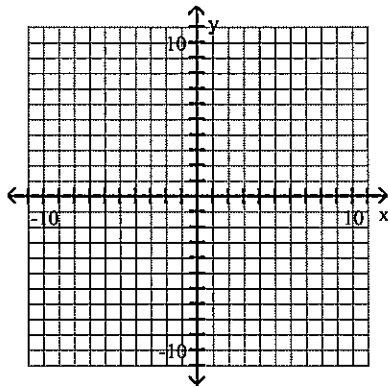
44)



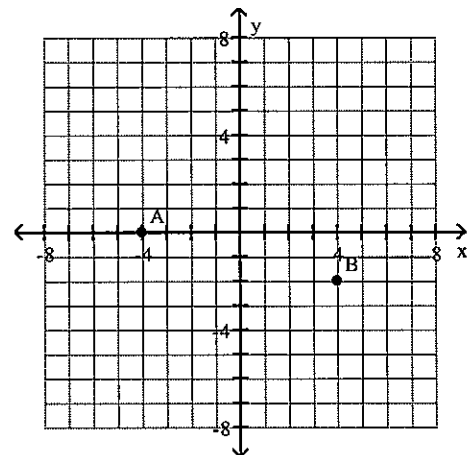
For the given equation, complete the table of values and plot the resulting ordered pairs.

42) $x + 1 = 0$

x	y
0	
2	
-2	
4	

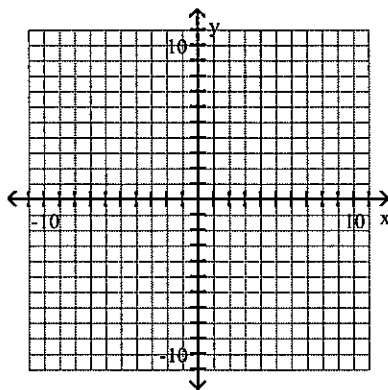


45)



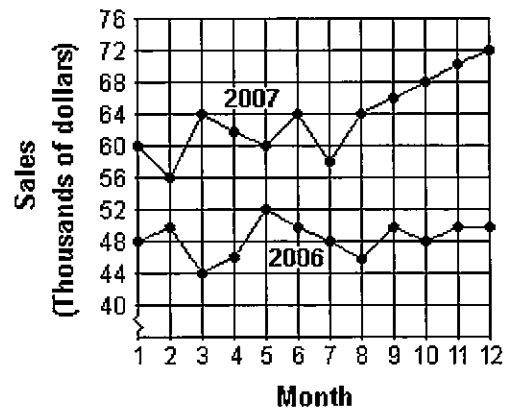
43) $y + 2 = 0$

x	y
0	
2	
-2	
4	



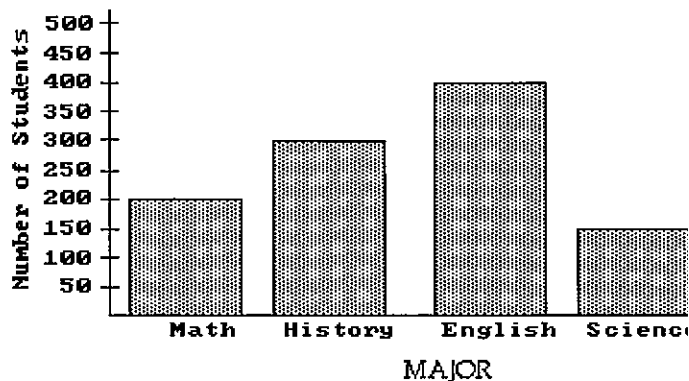
Use the graph to answer the question.

Big "D" Sales (2006 - 2007)



46) Which month in 2006 had the lowest sales?

The bar graph below shows the number of students by major in the College of Arts and Sciences. Answer the question.



47) How many students are majoring in History?

Evaluate the expression.

48) 3^{-2}

49) $14^0 + (-9)^0$

50) $5^{-1} + 4^{-1}$

Simplify. Assume that x and y are nonzero.

51) $\frac{(5x^2y)^3(xy^3)^4}{(xy)^3}$

Simplify. Write the answer using only positive exponents. Assume all variables represent nonzero numbers.

52) $\frac{(x-6)^{-2}}{(xy-2)^3}$

Determine whether the expression represents a number that is positive, negative, or zero.

53) 4^{-9}

54) $(-6)^{-4}$

55) -15^2

56) 20^0

57) $(-18)^0 - 58^0$

58) $(-7)^{-5}$

Write the number in standard/scientific notation.

59) 0.00007029

60) The earth is approximately 92,900,000 miles from the sun.

Write the number without exponents.

61) 6.789×10^{-5}

Write the quotient without using exponents.

62) $\frac{9 \times 10^2}{3 \times 10^1}$

Combine like terms when possible and write the polynomial in descending powers of the variable. Give the degree of the simplified polynomial. Decide whether the simplified polynomial is a monomial, a binomial, a trinomial, or none of these.

63) $7x^8 + 4x^3 + 9x^8$

64) $13n^4 - 3n^4 + 5n^2 + 15n^4 - 14n^2$

Perform the indicated operation.

65) $(7x^4 - 4x^2 + x) - (6x^3 + 9x^2 + 8x) + (2x^2 - x)$

66) $(3a^3b^5 - 4a^4b^2 + 9ab^3 - 6ab + 14) - (12a^3b^5 - a^4b^2 + 12ab^3 - 2)$

67) $3x^2(-3x^3 - 7x^2 + 2x - 6)$

68) $(x - 2)(x + 8)$

69) $(x + 11y)(3x + 9y)$

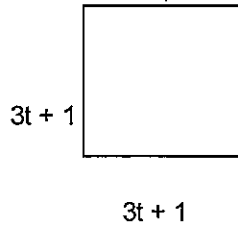
70) $(3x - 7y)^2$

71) $(10a + 9c)(10a - 9c)$

72) $(8m + 5)(2m^2 + m - 6)$

Solve the problem.

- 73) Determine a polynomial that represents the area of the square.



Perform the division.

74)
$$\frac{12x^8 + 16x^7 - 4x^5 + 8x^3}{4x^5}$$

75) $(36m^6n - 30m^5n^3 + 18m^4n^5) \div (6m^3n)$

76) Solve for h. $2h - b = 12$

77) Solve for y. $12x + 3y = 6$