

## Summer Algebra I, Algebra I Honors

Directions:

- Copy the problems onto notebook paper or graph paper.
- All work must be shown neatly on notebook paper and done in PENCIL.
- Please number all problems on your paper.
- NO CALCULATORS ARE PERMITTED FOR ANY SECTION.
- Copy your answers onto the answer sheet and staple your work to the back.
- Due Friday, September 2, 2011 (answer sheet and work).

What to do if you do not remember how to solve a problem:

- Go to Math.com
- Go to Purplemath.com
- Ask a friend or family member for help
- Visit [www.mckeelacademy.com](http://www.mckeelacademy.com) and look at the links provided on the Math teacher's page.

**Simplify each expression using the order of operations.**

ANSWERS 1.	$2 + 6 \times 8 \div 4$	5.	$(8-5)^2 \times 2 + 5$
2.	$10 \div 5 \times 2 + 6$	6.	$10^2 \div 10 + 8 \times 4$
3.	$4 + (20 \times 3)$	7.	$-2(5 - 8) + 18 \div 3$
4.	$30 - 2^2 + (5 + 5)$	8.	$5 + 8 \div 8 \times 2$

**Evaluate when  $x = 3$ ,  $y = 1$ , and  $z = 2$**

9.	$12 - (z - y)^2$	11.	$\frac{y}{z + 3y}$
10.	$3 + [(13 - x) \bullet 21]$	12.	$\left  \frac{z+2}{y+1} \right ^2 \div 4$

**Evaluate. Put fractional answers in simplest form.**

13.	$\frac{2}{3} \cdot 9$	16.	$1\frac{2}{5} \div 2\frac{5}{7}$
14.	$-\frac{4}{7} \cdot \frac{3}{4}$	17.	$\frac{8}{9} \div \frac{6}{36}$
15.	$3\frac{1}{2} \cdot 1\frac{6}{7}$	18.	$10 \div 3\frac{1}{3}$

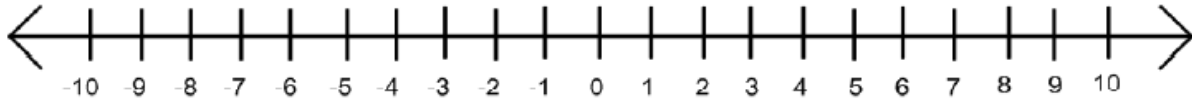
**EVALUATE**

19.	$(-19) + 8$	23.	$(-37) - (-26)$
20.	$(-23) + (-15)$	24.	$(-8)(-12)$
21.	$9 - 22$	25.	$(16)(-13)$
22.	$(-14) - 16$	26.	$\frac{-45}{1.5}$

**Solve.**

27.	What number is 5% of 186?	29.	What percent of 25 is 20?
28.	What number is 75% of 192?	30.	25% of what number is 6?

31  $2x < -14$  (graph the solution as well as solve)



32  $r - 8 > -10$  (graph the solution)



**Write an equation or inequality for each sentence. Use  $n$  for the variable.**

33.	A number increased by one is one-half of twenty-four.
34.	Seventeen is 42 minus one-half of a number.
35.	Eighteen times a number is 36.
36.	Four more than a number is less than 38.
37.	Eight times the sum of a number and three is 35.
38.	Four more than five times a number is less than or equal to 39.

**Solve each equation.**

39.	$n + 581 = 484$	44.	$-7n = 56$
40.	$n - 6 = 24$	45.	$57n = 171$
41.	$152 - n = 634$	46.	$\frac{n}{32} = 18$
42.	$37 + n = 2134$	47.	$3n - 2 = 10$
43.	$2n + 5 = 9$	48.	$\frac{n}{2} + 5 = 10$

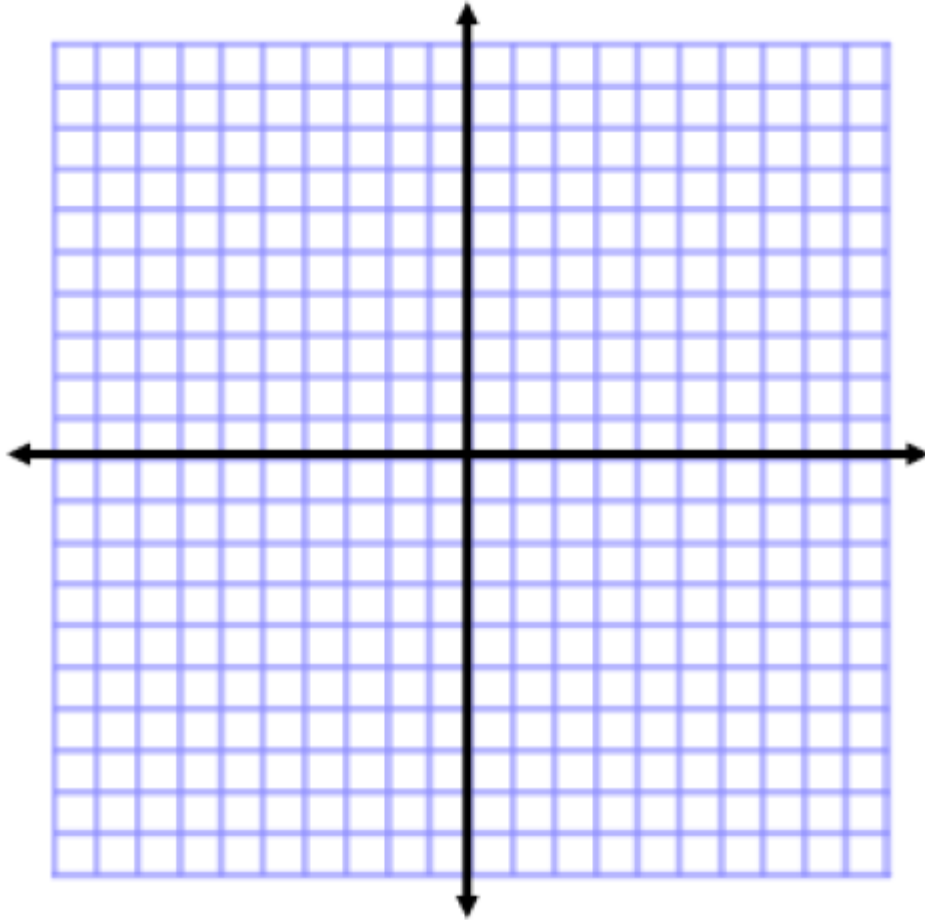
Using the graph below, graph the following points and label them.

49.  $A(5,5)$

50.  $B(3,-2)$

51.  $C(-4,-3)$

52.  $D(-5,4)$



Simplify by combining like terms or by using the distributive property.

53.	$2x + 5x + 7$	56.	$-5(3r + 8a)$
54.	$3(x - 4)$	57.	$8x - 6(x - 2) + 5$
55.	$5y + 8x + 9y + x$	58.	$4(x + 3) - 2(x + 9)$

**Solve each proportion.**

59.	$\frac{3}{z} = \frac{1}{8}$	61.	$\frac{f+3}{12} = \frac{7}{2}$
60.	$\frac{-4}{9} = \frac{7}{x}$	62.	$\frac{9}{2} = \frac{5}{x+1}$

**Solve.**

63.	Yoshi's care travels 18 miles on a gallon of gas. How far could the car travel on 17.6 gallons of gas?
64.	An equilateral triangle has a perimeter of 53.1 centimeters. What is the length of one of its sides?
65.	Jeff saved 12% on a coat that was marked \$108. How much did Jeff pay for the coat?