

# ALGEBRA 1 SUMMER PACKET

## SHERWOOD HIGH SCHOOL

### SUMMER 2011

#### General Information

- The purpose of this packet is to review important skills that you have learned which are necessary to succeed in Algebra 1:
  - Solving equations
  - Solving & graphing inequalities
  - Plotting points in the coordinate plane
  - Naming points in the coordinate plane
- This assignment is optional. It is designed to help you review and prepare for Algebra 1. It will not be collected or graded by your Algebra 1 teacher.

## Solving Equations

Example: Solve the equation below, then check the solutions.

$$6x - 10 = 20$$

① 
$$\begin{array}{r} 6x - 10 = 20 \\ \underline{+10} \quad \underline{+10} \end{array}$$

② 
$$\frac{6x}{6} = \frac{30}{6}$$

③ 
$$\boxed{x = 5}$$

④ Check:  $6(5) - 10 = 30 - 10 = 20 \checkmark$

Directions: Solve each equation below, then check the solutions.

1.  $w - 4 = 10$

5.  $5j - 3 = 12$

2.  $-7k = 14$

6.  $-6x + 3 = -9$

3.  $\frac{m}{-8} = 7$

7.  $\frac{f}{3} + 10 = 15$

4.  $\frac{4}{5}d = 12$

8.  $\frac{x - 6}{5} = -3$

## Solving & Graphing Inequalities

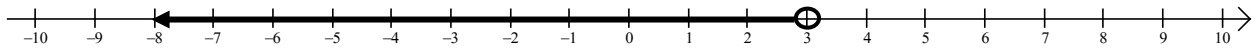
Example: Solve the inequality below, then graph the solutions.

$$2x + 5 < 11$$

① 
$$\begin{array}{r} 2x + 5 < 11 \\ \underline{-5} \quad \underline{-5} \\ 2x < 6 \end{array}$$

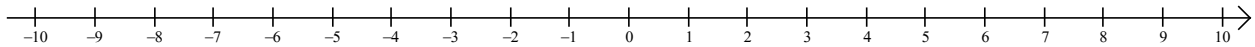
② 
$$\frac{2x}{2} < \frac{6}{2}$$

③ 
$$x < 3$$

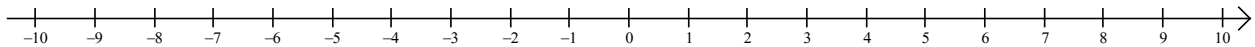


Directions: Solve each inequality below, then graph the solutions.

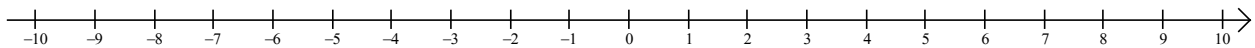
1.  $c + 5 > -2$



2.  $3p \leq 12$



3.  $4n + 1 > 9$



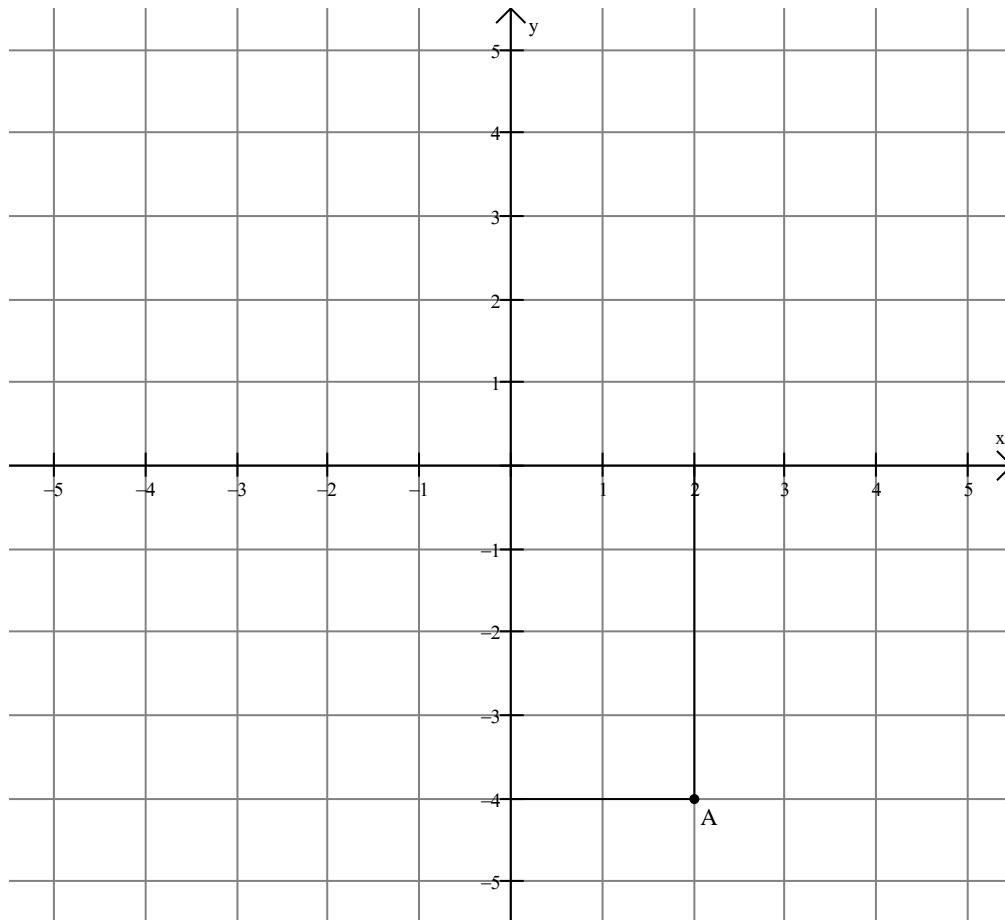
# Plotting Points

Example: Plot  $A(2, -4)$ .

- Start at the origin.
- Since the x-coordinate is 2, move 2 units to the right.
- Since the y-coordinate is  $-4$ , move 4 units down.

Directions: Plot each point below on the grid.

1.  $B(3, 5)$
2.  $C(-1, -3)$
3.  $D(4, 0)$
4.  $E(-5, 1)$



# Naming Points

Example: Give the coordinates of point A.

- Since point A is 5 units to the left of the origin, its x-coordinate is  $-5$ .
- Since point A is 2 units above the origin, its y-coordinate is 2.
- Therefore, the coordinates of point A are  $(-5, 2)$ .

Directions: Give the coordinates of each point below.

1. Point B:
2. Point C:
3. Point D:
4. Point E:

