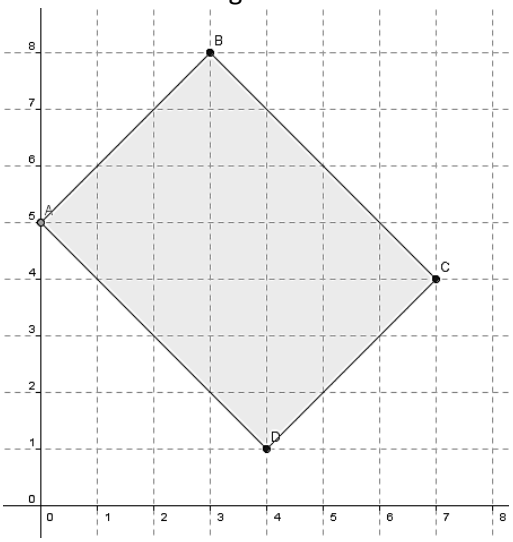
Finite Math B Name: _____
3.2 Linear Programming

Worksheet 3.2 – Linear Programming

The following graphs show regions of feasible solutions. Use these regions to **find maximum and minimum values of the given objective functions.**

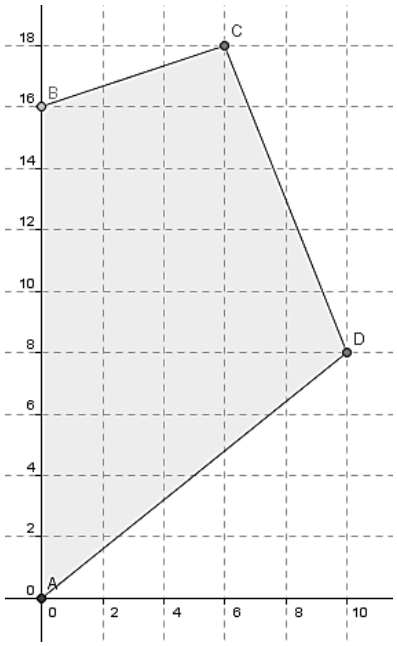
Use this feasible region for #1 & #2



1.) z = 3x + 2y

2) z = x – 4y

Use this feasible region for #3 & 4



3) z = 0.35x + 1.25y

4) z = 1.5x – 0.5y

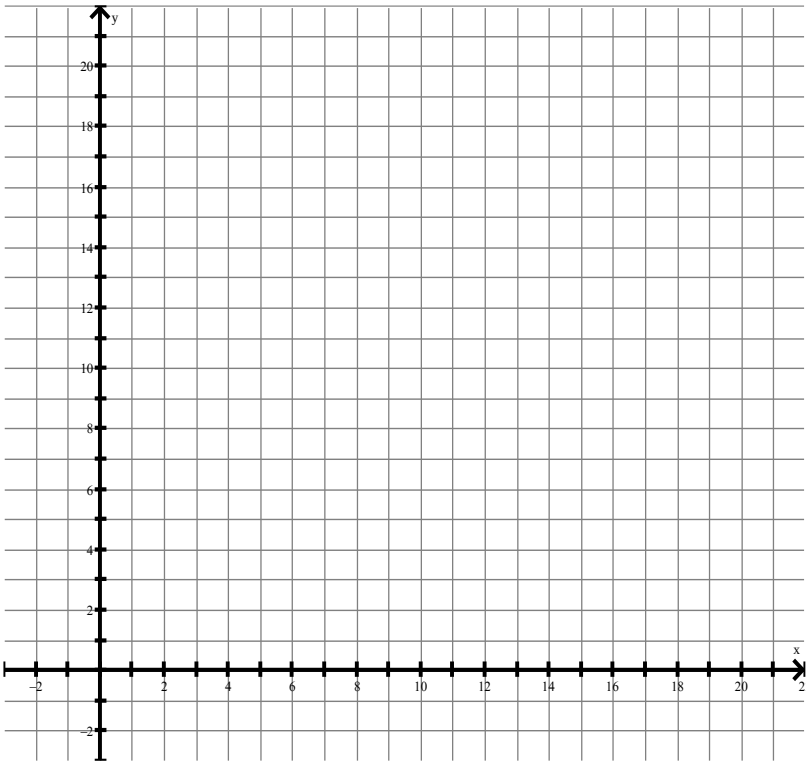
Find the Maximum or Minimum Value for the Objective Function for each set of constraints.

5. Maximize:

$z = 8x + 2y$

Subject to:

$4x + 5y \leq 35$
$x + 5y \leq 20$
$y \geq 0$
$x \geq 0$

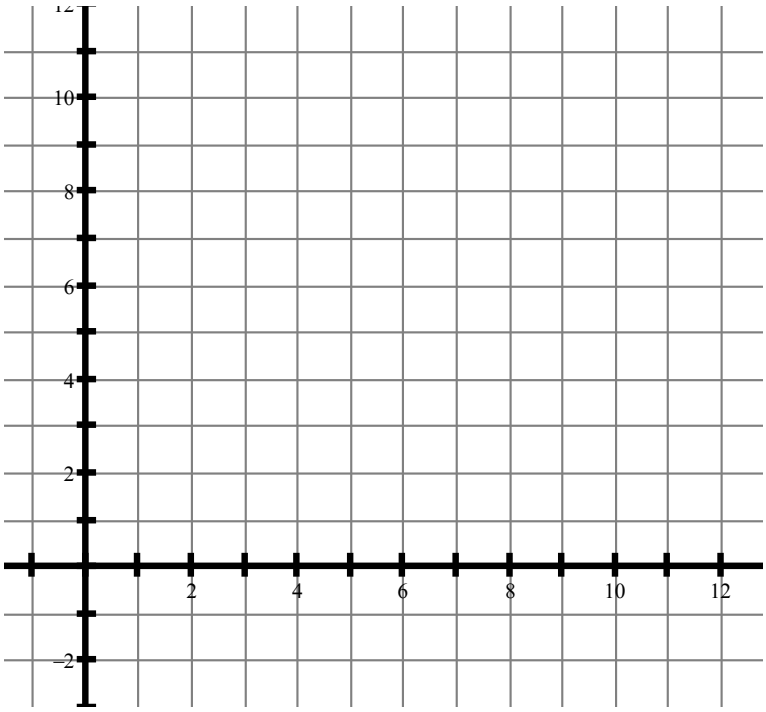


6. Minimize:

$z = x - 2y$

Subject to:

$3x + 4y \geq 12$
$x + 2y \leq 10$
$0 \leq x \leq 4$



7. Minimize:

$z = 4x + 7y$

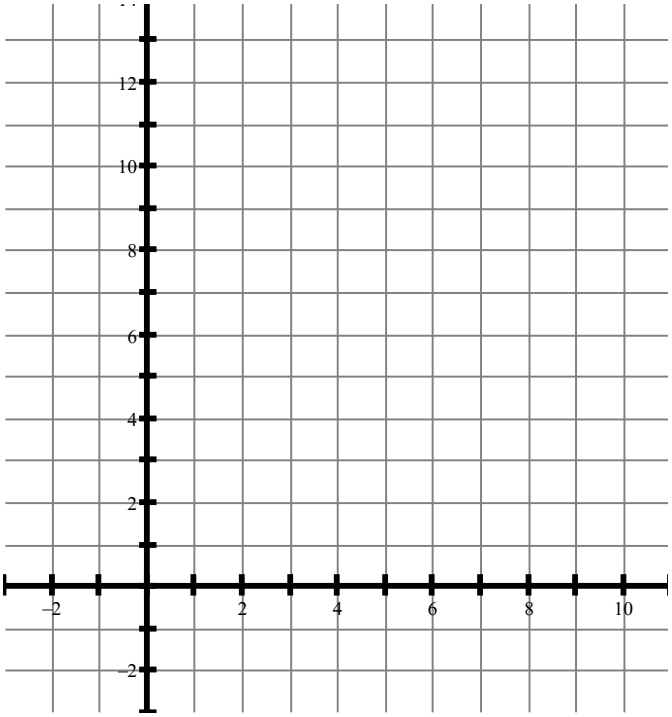
Subject to:

$x - y \geq 1$

$3x + 2y \geq 18$

$x \geq 0$

$y \geq 0$



8. Maximize:

$z = 5x + 2y$

Subject to:

$4x - y \leq 16$

$2x + y \geq 11$

$x \geq 3$

$y \leq 8$