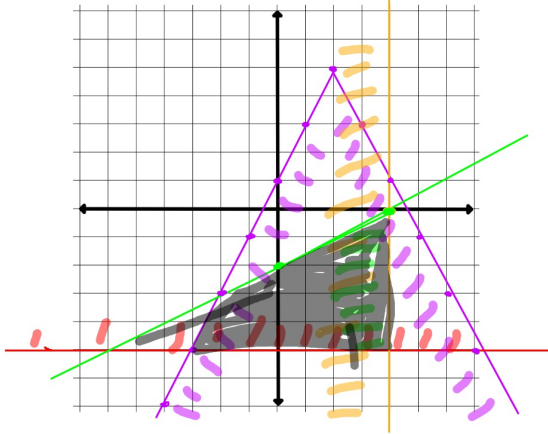


Graph this system of inequalities. Shade the solution region with a color and/or label it.

$$\begin{aligned} y &\leq -2|x - 2| + 5 \\ y &\geq -5 \\ x &< 4 \\ 3x - 6y &> 12 \end{aligned}$$

$$\begin{aligned} x &= 4 \\ y &= -2 \end{aligned}$$

Solution area is shaded in grey.

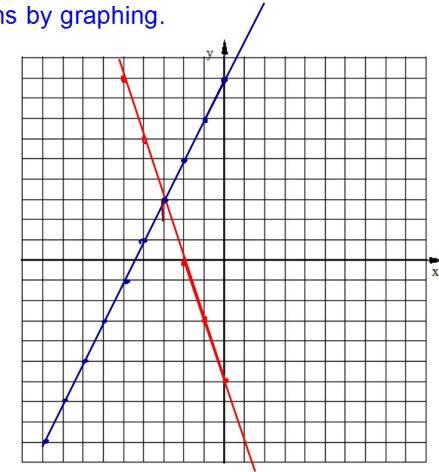


Solve this system of equations by graphing.

$$\begin{aligned} -15x - 5y &= 30 & x &= -2 \\ & & y &= -6 \end{aligned}$$

$$\begin{aligned} -8x + 4y &= 36 \\ +8x &+8x \\ \hline 4y &= 8x + 36 \\ y &= 2x + 9 \end{aligned}$$

$$(-3, 3)$$



To get better traction with her truck in the snow Sarah put some bags of sand and concrete in the back. Bags of sand weigh 60 lbs each and bags of concrete weigh 80 lbs each. She put a total of 1120 lbs in the back. The number of bags of concrete was one less than three times the number of bags of sand. Bags of sand cost \$5.50 each and bags of concrete cost \$11 each. How much did Sarah spend on all this sand and concrete?

$$\begin{aligned} C &= \# \text{ bags of concrete} \\ S &= \# \text{ bags of sand} \end{aligned}$$

$$\begin{aligned} 60S + 80C &= 1120 \\ C &= 3S - 1 \end{aligned}$$

$$I = 5.50(4) + 11(11)$$

$$I = \$143$$

she spent a total of \$143

$$\begin{aligned} 60S + 80(3S - 1) &= 1120 \\ 60S + 240S - 80 &= 1120 \\ 300S &= 1200 \\ S &= 4 \\ C &= 3(4) - 1 \\ C &= 11 \end{aligned}$$