



MATH 150 - WEEK-IN-REVIEW 1  
ALEXANDRA L. FORAN

PROBLEM STATEMENTS

1. Find an equation of the line through the points  $(5, 4)$  and  $(-10, -2)$ .
  
  
  
  
  
  
  
  
  
  
2. Find an equation of the line through the points  $(5, 4)$  and  $(5, -2)$ .
  
  
  
  
  
  
  
  
  
  
3. Write an equation of a line a) parallel to and b) perpendicular to the line  $6x - 4y = -5$  and passing through the point  $(3, 2)$ .



4. Solve the following inequalities. Graph their solution set.

(a)  $\frac{x}{3} + \frac{1}{2} > \frac{4x - 1}{6}$

(b)  $-3 < \frac{2x - 1}{2} \leq 4$

(c)  $|4x - 5| \geq 11$



5. Simplify the following expression. Write your answer so that each variable appears at most once, and all exponents are positive.

$$\frac{12(xy^{-1})^3(x^{-2}y^2)^2}{20(x^{-4})^{-2}(xy^{-3})^2}$$

6. Simplify each radical expression.

(a)  $\frac{\sqrt[3]{-24x^4y^2z^6}}{\sqrt[3]{81xy}}$

(b)  $\sqrt{x^3} + \sqrt{4x^3} - \sqrt{x}$