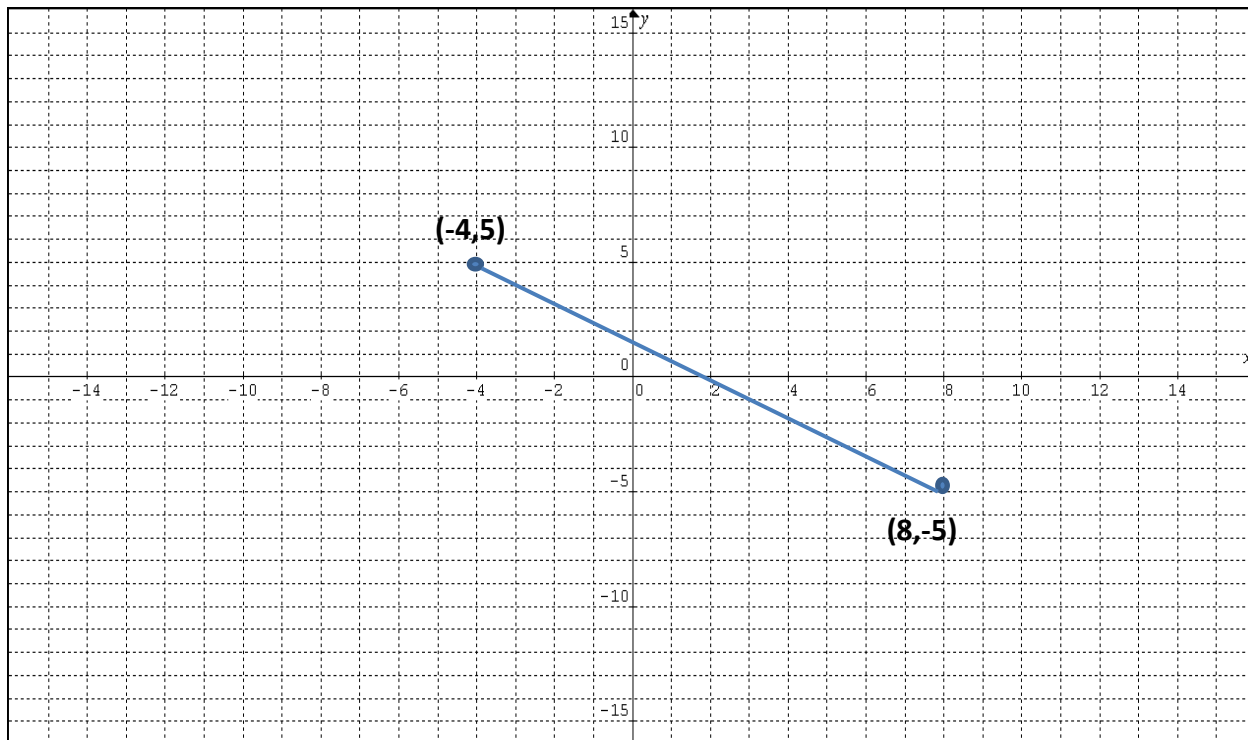


Week 1 Math 1508 Worksheet #2

Problem 1: Calculate the distance between the two points on the graph. Explain why this graph is a function of x .



Problem 2:

Identify any intercepts and test for symmetry for the equation:

a. $y = x^3 - 1$

b. $y = 2 - |x|$

Problem 3:

Write equations of the lines through the given point (a) parallel to and (b) perpendicular to the given line.

$$-2x - 6y = 7, \quad \left(-5, -\frac{5}{7}\right)$$

Problem 4:

Find the domain and range for the following functions

a. $f(x) = \frac{x}{2x-6}$

b. $g(x) = \frac{2x}{\sqrt{2x-6}}$

c. $f(x) = \frac{x+4}{x^2+5x+4}$

Problem 5:

Why are the domains different in parts a) and b) in Problem 4? Please write a short paragraph (5 sentences) explaining your answer.