

Exam 2

Student Name: _____

Student ID#: _____

Each problem is worth 5 points. Give a complete solution to receive the full credit!

1. Find the real solutions of the equation. (Hint: You might want to recall factoring problem from the Exam 1.)

$$x^3 + x - 2 = 0$$

2. Solve the equation over the field of real numbers.

$$\sqrt[3]{2 - x} = x$$

3. Solve the equation.

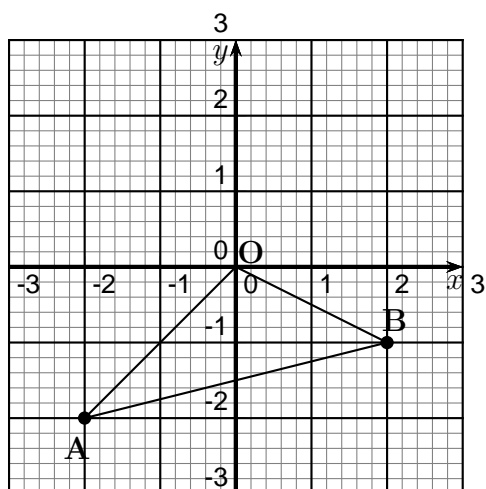
$$|2x + 1| = |7 - x|$$

4. Solve the inequality

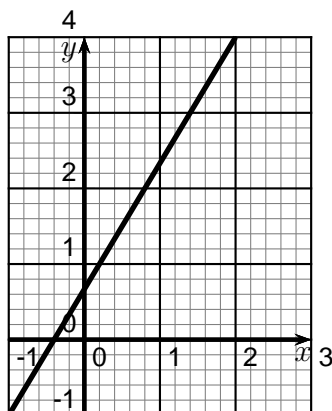
$$(x + 3)^{-1} \leq \frac{3}{8}$$

5. Doug left a \$3.50 tip for his server at a restaurant. If the tip was 18% of his meal price, how much did Doug pay for his meal?
6. (a) Convert into percentages 1.47 , $4.234 \cdot 10^{-3}$, and $\frac{5}{18}$.
(b) Convert into fractions $9.3 \cdot 10^{-3}$ and 12030.45% .

7. Find the parameter of the triangle $\triangle ABC$.



8. (a) Find the equation of the straight line.



- (b) Find the equation of the line containing the point $(2,3)$ and parallel to the given line.

9. Solve the inequality

$$|5 - x| \leq 2^{-3}$$

10. The cost C , in dollars, of renting a car for a day is given as a function

$$C(m) = 0.35m + 20$$

of miles driven. If the cost of renting the car is \$90, how many miles was the car driven?