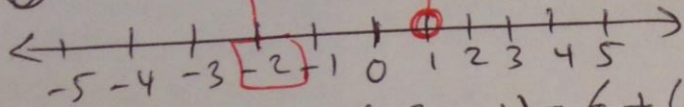
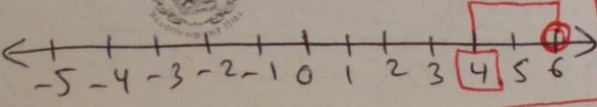


g) $-(-1) - (-3) = 1 + (-3) = -2$

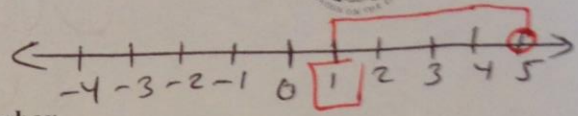


h) $+(-3) \cdot (-2) + -(-2 \cdot -1) = 6 + (-2) = 4$



i) $-\frac{15}{-3} + (-\frac{2}{0.5})$

$= 5 + (-4) = 1$



Mathematics 52
Homework 2
Fall 2016

Professor: Mohammed Kaabar
Course ID: (27488) and (27501)

Student's Name: Mohammed Kaabar
Student's ID: Solution

Note: This homework covers some problems from the real number operations and properties.

Solve the following three problems:

Problem 1: Determine whether the following is true or false:

a. $-500.34 \geq -200.87$ False

b. $|\frac{-200}{2}| < \{(3455.45) - (4000.23)\} = 100 < -544.78$ False

c. $3.56 \leq 3.56$ True

d. $2.56 \geq 2.56$ True

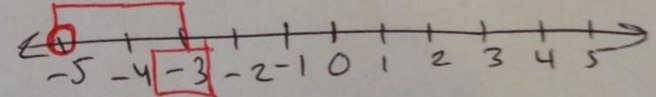
e. $0.\overline{3} > 0.44$ False because $0.333333 < 0.44$

f. $\frac{2^3 + \sqrt{125} + (\frac{15}{5})}{(\frac{22}{2}) + |-20|} \geq \frac{\sqrt{25} - |-23| + 64^{\frac{1}{2}}}{34 + \sqrt{100}}$ True (see Quiz #2 Solution)

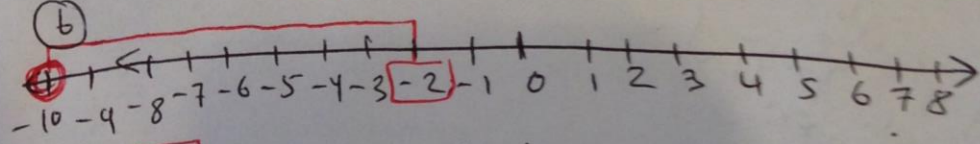
g. $2^0 < 2^{0.5-1}$
 $1 < 2^{-0.5} \Rightarrow 1 < \frac{1}{\sqrt{2}}$ False

Problem 2: Add the following using the number line:

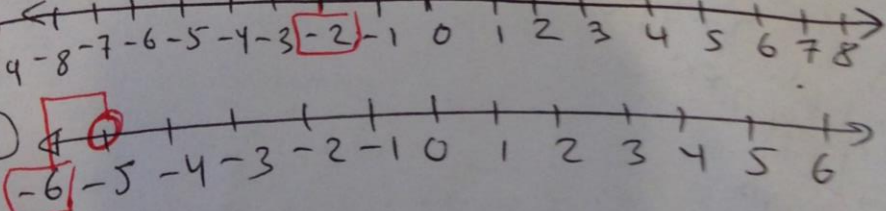
a. $-5 + 2 = -3$ (a)



b. $-10 + 8 = -2$



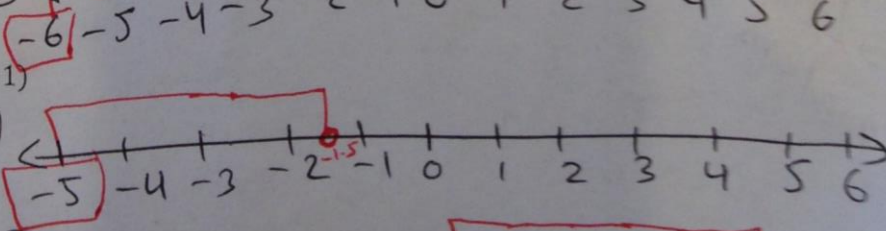
c. $-5 - 1 = -6$ (c)



d. $-3.5 - 1.5 = -5$

e. $0 - 4 = -4$

f. $5 + (-5) = 0$ (f)

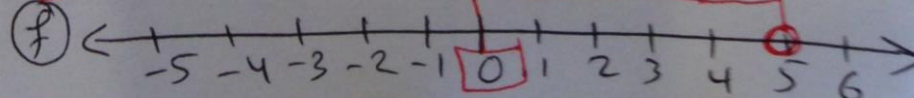
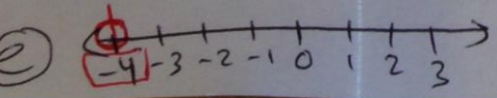


g. $-(-1) - (-3) = -2$

h. $+(-3) \cdot (-2) + -(-2 \cdot -1)$

i. $-\frac{15}{-3} + (-\frac{2}{0.5}) = 1$ (d)

Solution above



Problem 3: Simplify (evaluate) the following mathematical expression:

$$4 \cdot 2^2 \left(\frac{10}{2}\right)^5 + \sqrt[3]{125} + 2 - 1 = \frac{(4 \cdot 5) + 5 + 2 - 1}{\left(\frac{50}{2}\right) - 12 + 2^0} = \frac{25 - 12 + 1}{20 + 5 + 2 - 1} = \frac{13}{26} = \frac{1}{2}$$

Extra Credit Problem 1 (2 points): Simplify (evaluate) the following mathematical expression:

$$2^{-1} \left(\frac{10}{0.5}\right) + \sqrt[4]{390625} + e^0 + |12 - 50| - 1 = \frac{0.5(20) + 25 + 1 + 38 - 1}{25 - 12 + 1} = \frac{73}{29}$$

$$\frac{0.5(20) + 25 + 1 + 38 - 1}{25 - 12 + 1} = \frac{73}{29}$$

Extra Credit Problem 2 (3 points): Answer the following questions:

a. Your professor Mohammed Kaabar received an academic award in 2016 from California State University – Long Beach. What is the name of the award that he received from CSU – Long Beach? **Hint: Use this resource:**

http://info.merlot.org/merlohelp/merlot_awards_peer-reviewer-extraordinaire.htm

b. What are the methods of innovative math teaching that Mohammed Kaabar mentioned them in his famous blog's post published on the American Mathematical Society? **Hint:**

Use this resource: <http://blogs.ams.org/mathgradblog/2015/11/28/students-overcome-fears-create-supportive-classroom-students-good-questions/#sthash.AefgbV3W.dpbs>

c. What is the title of Mohammed Kaabar textbook that is currently used for MATH 2320 course at Houston Community College? **Hint: Use this resource:**

<http://hcclibraries.net/ListMath>

Peer Reviewer Extraordinary
Tables Summaries
Binary Method
A Friendly Introduction to Differential Equations

We always learn from the challenging math problems.
Practice + Study = Success
Good Luck
Mohammed Kaabar

