

MATH 4: HOMEWORK 13
JANUARY 12, 2020

1. Compute:

a. $-7 - (-9) =$ b. $-(-6 + (-4)) =$ c. $-3 - (7 + (-6)) =$
d. $-3 - (-4) + (-5) =$ e. $-(-(2) + 5) =$ f. $-\frac{3}{4} - (-1\frac{1}{4}) =$

2. Simplify by moving all variables and numbers to the left, leaving 0 (zero) on the right side of your equation.

a. $2x + 2a - 7 = x - 2a - 7$ b. $3y - 2b + 4 = b - y - 4b$
c. $5x + 3 - a = 7 + a - x$ d. $-3z + a = 2a + 2z - 5$

3. Compute: *[Remember order of operation rule: parenthesis go first!]*

a. $\frac{1}{8} \div (\frac{3}{4} + \frac{1}{2}) =$ b. $(\frac{1}{12} + \frac{1}{15}) \div 2 =$ c. $(\frac{5}{8} + \frac{1}{3}) \div (\frac{5}{8} - \frac{1}{3}) =$

4. Solve equations:

a. $\frac{3}{4}x = 2$ b. $\frac{2}{7}x = 3$ c. $\frac{7}{4}x = \frac{1}{3}$

5. In a bike competition, the distance is 30 miles. A boy rode the first half of the distance at speed of 14 miles per hour and the second half, at 10 miles per hour (it was uphill, and he was tired). "Therefore", he argued, "my average speed is 6 mph, so it should take me $30 \div 6 = 5$ hours to complete the distance". Is he correct?
6. A child built a toy rail road 5 meters (m) long. He also bought two trains which run on batteries. Unfortunately he ran out of batteries and had to get the batteries from other toys. After the batteries' installation the first train could run 30cm/s and the second train only 10 cm/s. He made the trains run toward each other. In how many seconds the trains will meet?
7. There were two pieces of cloth of the same length. When Kate cut 18 m from the first piece and 25 m from the second piece, the remaining part of the first piece became twice as long as the remaining part of the second piece. How long were the first and the second pieces initially? *[You can solve it without equation]*