

Math 12 – Workshop #2

1. Evaluate each expression

(a) $2 - 6 \div 3 + 1$

(b) $(4 + 8) \div (7 - 4)$

(c) $\frac{22(3 - 2)}{32 \cdot \frac{1}{2} \cdot 4}$

2. Insert a pair of parenthesis to make the following expression

$$- 2 \cdot 3^2 + 5 + 2^2$$

(a) equal to -24

(c) equal to 31

(b) equal to 45

3. If we cut along the dotted line the shown rectangle is split into two smaller rectangles. After cutting the perimeter of the smaller rectangle is 5 and the larger rectangle has perimeter 12.



(a) What is the perimeter of the original rectangle?

(b) What is the area of the original rectangle?

4. Find solutions to the following if possible

(a) $\frac{2}{3}x = 5$

(b) $2x = 12x + 14$

(c) $2(x + 1) = \frac{1}{2}(x - 5) + 1$

5. Solve the following expression for x ,

$$\frac{x - 1}{3} + 2x = \frac{3x}{2} + \frac{4}{6}$$

6. Solve the following for the variable a

$$3M = b(a + 1) - c$$

7. Solve for x and then find a value of a for which the following expression has no solution

$$x = ax + 1.$$

8. A runner went out to run 4 days in a row. On the second day they doubled the distance from first day. On the third day they went three quarters of the distance from the second day. On the fourth day they went half the distance from the third day. Total they ran 21 miles. How far did they run on the first day?