

MATH 4: Homework 9

Due November 25, before the start of the class

Homework must be submitted on time—at least 15 minutes before the start of the class.

Homework will not be graded after the solutions are posted on Google Classroom.

Write the answers on separate sheets of paper, not between the lines.

1. Open the parentheses:

a. $4(3w - 2) =$ _____

b. $(2w + 4) \cdot 3 =$ _____

c. $4(3w - 2) + (2w + 4) \cdot 3 =$ _____

2. Fill the empty spaces so that equalities are true.

a. $5 \cdot (4 + 7) = 5 \cdot \underline{\quad} + \underline{\quad} \cdot 7;$

b. $\underline{\quad} \cdot (11 - 7) = \underline{\quad} - 21;$

c. $(\underline{\quad} - \underline{\quad}) \cdot 20 = 80 - 60;$

d. $(35 + a) \cdot 2 = \underline{\quad} + 2a;$

e. $10 \cdot (\underline{\quad} - \underline{\quad}) = 140 - 10x;$

f. $9c + \underline{\quad} = (9 + 1)c;$

3. Find the equal fractions:

$$\frac{1}{16} = \frac{\quad}{32}$$

$$\frac{6}{9} = \frac{\quad}{81}$$

$$\frac{2}{7} = \frac{\quad}{21}$$

$$\frac{2}{\quad} = \frac{10}{15}$$

4. Which sign (+, −, ·, ÷) should be placed instead of * to make the following equalities true statements.

a. $\frac{7}{8} * 1\frac{1}{7} = 1$

b. $\frac{3}{7} * \frac{4}{7} = \frac{3}{4}$

c. $2 * 1\frac{1}{3} = \frac{2}{3}$

d. $\frac{3}{10} * \frac{5}{6} = \frac{1}{4}$

5. The sum of all numbers in each square is 10. What number should be placed instead of “?” ?

$\frac{5}{9}$?
$2\frac{7}{9}$	$1\frac{2}{9}$

?	$6\frac{8}{11}$
$\frac{2}{11}$	$2\frac{5}{11}$

6. Solve the equations:

a. $\frac{3}{4}x = 6$

b. $\frac{2}{5}y = 8$

c. $\frac{3}{7}w = 12$

7. Alice, Luis, and Nicolas played a game. Alice earned $\frac{1}{4}$, and Luis earned $\frac{3}{5}$ of all the points played. What part of all points did Nicolas earn? Who won?

8. The father is 40 years old. The son's age is $\frac{3}{8}$ of the father's age. How old is the son?

9. Find GCF (GCD) for numbers ***n*** and ***m***. The numbers are already shown in their prime factorization form

a. $n = 2 \cdot 3 \cdot 3 \cdot 3 \cdot 5 \cdot 11$, $m = 2 \cdot 2 \cdot 3 \cdot 5 \cdot 7 \cdot 13$

b. $n = 2 \cdot 2 \cdot 5 \cdot 5 \cdot 7 \cdot 31$, $m = 2 \cdot 2 \cdot 3 \cdot 5 \cdot 55 \cdot 31$