

Solve in this handout:

1. Make Venn diagrams if needed to find GCD and LCM of ...

a). ... 16 and 12;

b). ... 28 and 30;

c). ... 196 and 21.

$16 = \underline{\hspace{2cm}}$

$28 = \underline{\hspace{2cm}}$

$196 = \underline{\hspace{2cm}}$

$12 = \underline{\hspace{2cm}}$

$30 = \underline{\hspace{2cm}}$

$21 = \underline{\hspace{2cm}}$

$\text{GCD}(16, 12) = \underline{\hspace{2cm}}$

$\text{GCD}(28, 30) = \underline{\hspace{2cm}}$

$\text{GCD}(196, 21) = \underline{\hspace{2cm}}$

$\text{LCM}(16, 12) = \underline{\hspace{2cm}}$

$\text{LCM}(28, 30) = \underline{\hspace{2cm}}$

$\text{LCM}(196, 21) = \underline{\hspace{2cm}}$

2. Calculate:

$2 - 7 = \underline{\hspace{2cm}}$

$2 - 7 - (-4) = \underline{\hspace{2cm}}$

$-1 - (-8) = \underline{\hspace{2cm}}$

$12 - 7 - 4 = \underline{\hspace{2cm}}$

$-14 + 4 = \underline{\hspace{2cm}}$

$-2 - 7 - 4 = \underline{\hspace{2cm}}$

3. Remove parenthesis:

$(x + 7) = \underline{\hspace{2cm}}$

$2(3y - 1) = \underline{\hspace{2cm}}$

$(x + 7) \cdot 2 = \underline{\hspace{2cm}}$

$11(2t + 3) = \underline{\hspace{2cm}}$

$3(x - 3) = \underline{\hspace{2cm}}$

$(3x - 2 + w) \cdot 7 = \underline{\hspace{2cm}}$

$5(18 - w) = \underline{\hspace{2cm}}$

$(2y + 1 - 4x) \cdot 3 = \underline{\hspace{2cm}}$

$(x - y) \cdot 7 = \underline{\hspace{2cm}}$

$4(4x - t + 3w) = \underline{\hspace{2cm}}$

Solve in your notebook:

4. Plastic forks come in 16-packs; plastic knives come in 12-packs. What is the smallest number of packages of each kind you need to buy to get the same number of forks and knives?

5. Use a **drawing** to compose an **equation** for the following word problem:

A boy found a portal to the “Jurassic Park” movie world and back and decided to bring dinosaurs' eggs home and hatch them in an incubator to raise his school popularity. On the first night he brought some eggs of “unknown species” home and hid them under the bed. Next day he brought 18 eggs of Velociraptor and decided to stop using the portal. The total number of eggs at the end was 3 times more than the number of eggs he brought on the first night. How many eggs of “unknown species” the boy brought home for raising his popularity?

6. Try to solve this problem **without** composing an **equation**:

An apple cost 5 cents, and an orange 7 cents. Marina bought some apples and oranges, 20 fruit in all, and paid \$1.14. How many apples and how many oranges did she buy?

7. There are three points in Cartesian coordinates: **Q**(8, 7), **P**(0, -1), and **W**(6, 4). Find coordinates of points **R** and **T**:

$$\{\mathbf{R}, \mathbf{T}\} = \mathbf{PQ} \cap \text{Circ}(\mathbf{W}, 5)$$

Attention: the radius is not 5 cm but 5 UNITS in your Cartesian coordinates.