

**WARM-UP**

**1.**

Grandma put 12 crepes on 2 plates. How many crepes can be on one plate?

Write down all possibilities: \_\_\_\_\_

What word should we add to the problem to get only one correct answer?

**2.**

A clock shows 10:30 am. A school day started 100 minutes ago. When did school day start?

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**3.**

Compare using  $>$ ,  $<$ , or  $=$ .

$254 - a \square 204 - a$

$m - 63 \square m - 36$

$c + d \square d + c$

$b - 287 \square b - 56$

$310 + n \square 305 + n$

$440 - k \square 540 - k$

**4.**

Solve and check:

$351 + x = 610$

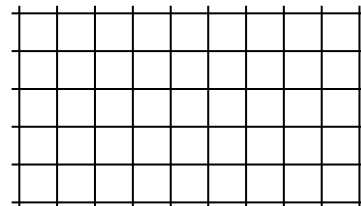
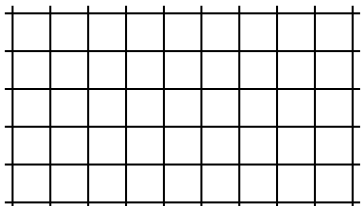
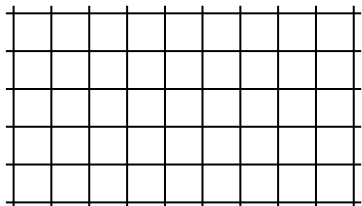
$y - 119 = 333$

$z + 124 = 172$

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

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

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



## NEW MATERIAL

5.

**Multiplication and Division by 0.**

Dividing by zero. Division is a reverse operation for multiplication.

$$A \div B = C \text{ means that } C \times B = A$$

$A \div 0$  has no meaning, as there is no number, which, multiplied by 0, gives A (assuming  $A \neq 0$ ), and so **division** by zero is undefined.

$$C \times 0 = 0 \text{ and never } = C$$

Dividing by 0 is not allowed  ~~$a \div 0$~~

Solve equations:

$$X \div 3 = 7$$

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$$x \div 4 = 6$$

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$$3 \times x = 21$$

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$$6 \times x = 24$$

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6.

**Associative and Distributive Properties of multiplication.**

**Associative Property:** When three or more numbers are multiplied, the product is the same regardless of the grouping of the factors.

$$(a \times b) \times c = a \times (b \times c) = a \times b \times c$$

**Distributive property:** When we multiply a sum or difference by a number, it gives the same result as multiplying each term by the number and then adding the products together.

$$4 \times (2 + 3) = 4 \times 2 + 4 \times 3 \quad \text{or} \quad a \times (b + c) = a \times b + a \times c$$

$$\text{if } a > b, \text{ then } (a - b) \times c = a \times c - b \times c$$

a) Rewrite using distributive property:

$$3 \times (n - t) = \underline{\hspace{4cm}}$$

$$9 (w - b) = \underline{\hspace{4cm}}$$

$$w (3 + 4) = \underline{\hspace{4cm}}$$

b) Rewrite each problem using the associative property and find the answer.

$$(10 \times 5) \times 8 = \underline{\hspace{4cm}}$$

$$(7 \times 11) \times 2 = \underline{\hspace{4cm}}$$

$$9 \times (2 \times 7) = \underline{\hspace{4cm}}$$

7. Calculate using the associative property of multiplication.

$$(8 \times 2) \times (6 \times 5) = (2 \times 5) \times (8 \times 6) = \underline{\hspace{4cm}}$$

$$(35 \times 60) = (7 \times 5) \times (6 \times 10) = \underline{\hspace{4cm}}$$

## REVIEW

### Commutative property of addition

The **Commutative property** of multiplication says that when two numbers multiplied together, the product is the same regardless of the order of multiplicands.

Which of the examples below illustrates the commutative property of multiplication?

$$6 \times 1 = 6$$

$$9 \times 3 = 3 \times 9$$

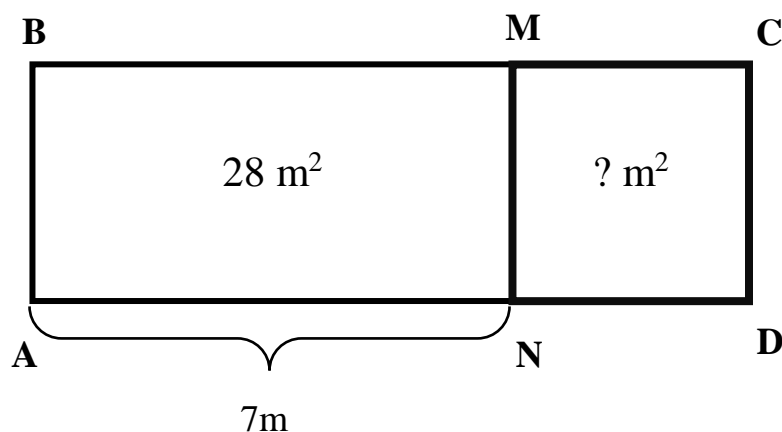
$$6 \times (2 \times 7) = (6 \times 2) \times 7$$

$$9 \times (3 \times 7) = (9 \times 3) \times 7$$

$$6 \times 2 = 2 \times 6$$

$$82 \times 18 = 18 \times 8$$

9. Find the area of square NMCD.  $A = \underline{\hspace{4cm}}$



10.

Two frogs – Ben and Dina decided to visit each other.

Ben started from point A (2, 8), then he jumped 3 squares to the right, to the point B. Then he jumped 3 squares down and end up at the point C. What are the coordinates of points B and C?

Dina started at the point K (7, 1), then she jumped 4 squares up to the point L, then she jumped 4 squares to the left to the point M. What are the coordinates of points L and M?

How many squares are between points C and M? What jumps Ben and Dina should make to meet each other? Mark the point of meeting as a point O and write its coordinates.

