

Math 2 Classwork 24

Warm Up

1

Multiplication table. Solve as many as you can in **3 minutes**.

$10 \times 10 =$

$10 \times 11 =$

$4 \times 11 =$

$6 \times 11 =$

$4 \times 70 =$

$60 \times 6 =$

$20 \times 11 =$

$6 \times 7 =$

$3 \times 7 =$

$6 \times 9 =$

$7 \times 8 =$

$70 \times 60 =$

$50 \times 70 =$

$70 \times 8 =$

$70 \times 6 =$

$80 \times 100 =$

$8 \times 8 =$

$40 \times 7 =$

$40 \times 60 =$

$8 \times 9 =$

$9 \times 9 =$

2

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

$254 - a \square 204 - a$

$m - 63 \square m - 36$

$c + d \square d + c$

$b - 287 \square b - 56$

$310 + n \square 305 + n$

$440 - k \square 540 -$

3

Without calculations, write all expressions in the descending order (from the largest to smallest):

$12 \times 123, \quad 123 \times 14, \quad 123 \times 17, \quad 18 \times 123, \quad 123 \times 15, \quad 13 \times 123$

4

$1\text{m} = 10\text{ dm} = 100\text{ cm}$

$1\text{ m}^2 = 100\text{ dm}^2 = 10,000$

$2\text{ cm}^2 + 5\text{ cm}^2 = \underline{\hspace{2cm}}\text{ cm}^2$

$3\text{ dm}^2 - 2\text{ dm}^2 = \underline{\hspace{2cm}}\text{ dm}^2$

$15\text{ cm}^2 - 7\text{ cm}^2 = \underline{\hspace{2cm}}\text{ cm}^2$

$11\text{ dm}^2 + 7\text{ dm}^2 = \underline{\hspace{2cm}}\text{ dm}^2$

$500\text{ cm}^2 + 1\text{ dm}^2 = \underline{\hspace{2cm}}\text{ cm}^2$

$500\text{ cm}^2 + 1\text{ dm}^2 = \underline{\hspace{2cm}}\text{ dm}^2$

Homework Review

5

Insert missing numbers:

$15 + (5 \times \dots) = 25$

$15 + (5 \times \dots) = 55$

$15 + (5 \times \dots) = 40$

$15 + (5 \times \dots) = 60$

$15 + (5 \times \dots) = 70$

$15 + (5 \times \dots) = 75$

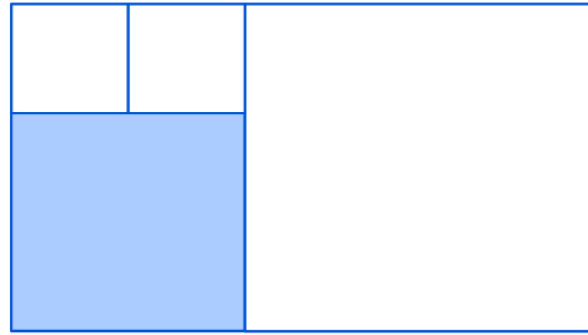
Lesson 24 Distributive property of multiplication. Expanding parentheses.

6

Rectangle is divided into 4 squares. Find a perimeter and an area of the rectangle if one side of the shaded square is 8 cm.

P = _____

A = _____



New Material I

The distributive property is one of the most commonly used properties in mathematics.

When you distribute something, you are dividing it into parts. In math, the distributive property helps simplify difficult problems because it breaks down expressions into the sum or difference of two numbers.

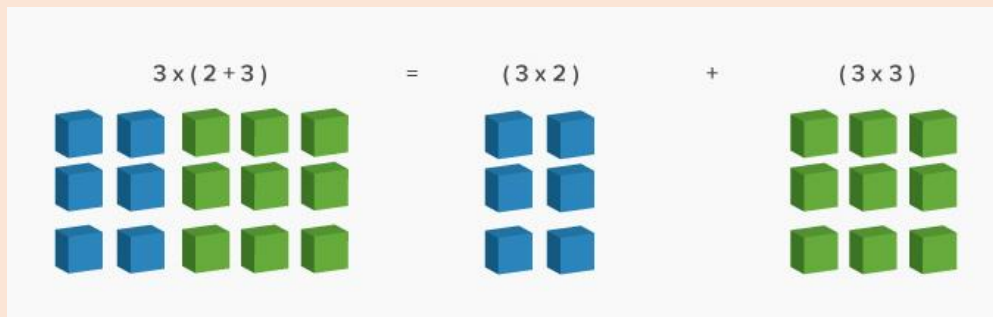
For expressions in the form of $a \times (b + c)$, the distributive property shows us how to solve them by:

- Multiplying the number immediately outside parentheses with those inside
- Adding the products together

$$a(b + c) = ab + ac$$

According to the distributive property, multiplying the sum of two or more addends by a number will give the same result as multiplying each addend individually by the number and then adding the products together.

An example: $3 \times (2 + 3) = 3 \times 2 + 3 \times 3 = 6 + 9 = 15$ We will get the same answer if we 3×5



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7

Re-write the expressions, using the distributive property:

$$3(z + 6) = \underline{\hspace{2cm}}$$

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

$$4(a + 3) = \underline{\hspace{2cm}}$$

$$5(4 - q) = \underline{\hspace{2cm}}$$

$$5(2z + 9) = \underline{\hspace{2cm}}$$

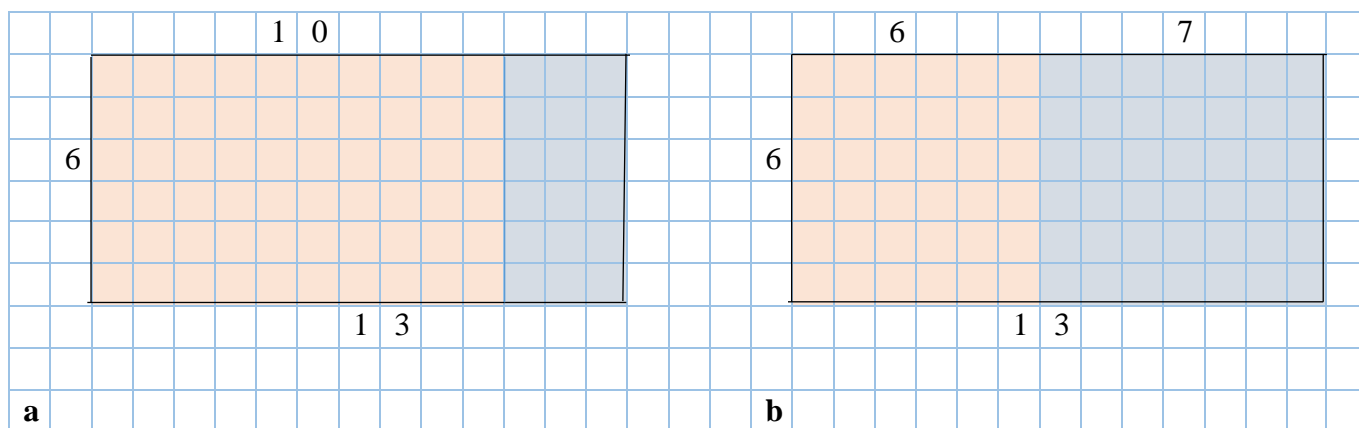
$$2(8 - 2y) = \underline{\hspace{2cm}}$$

$$4(2a + 6) = \underline{\hspace{2cm}}$$

8

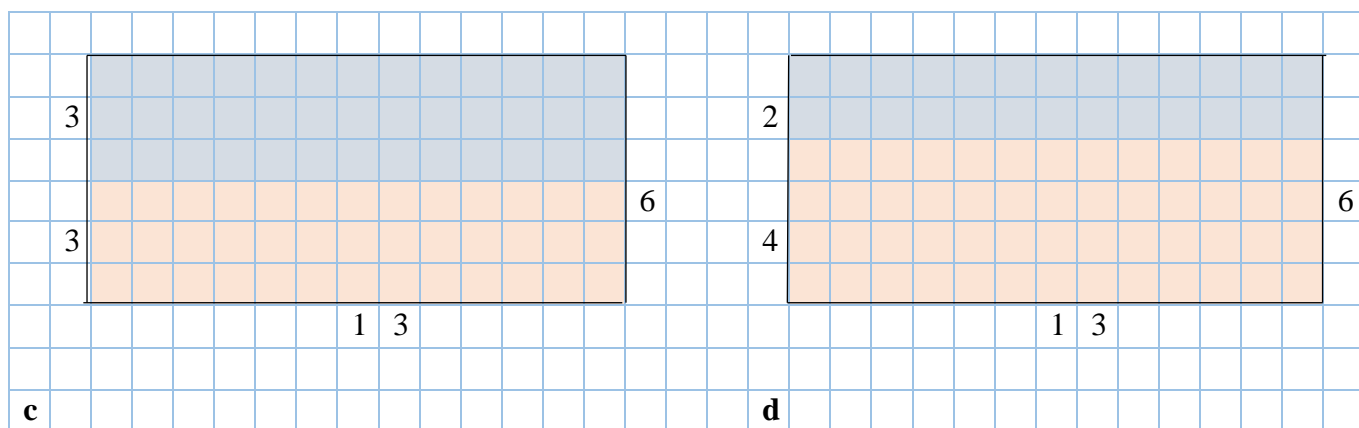
Using the drawing to understand the Distributive Property:

Calculate 6×13 using the distributive property of multiplication. Consider 4 different ways:



a) $6 \times 13 = 6 \times (10 + 3) = 6 \times 10 + 6 \times 3 = 78$

b) $6 \times 13 = 6 \times (6 + 7) = 6 \times 6 + 6 \times 7 = 78$



c) $6 \times 13 =$

d) $6 \times 13 =$

Q: Did you get the same answer? Why? _____

REVIEW

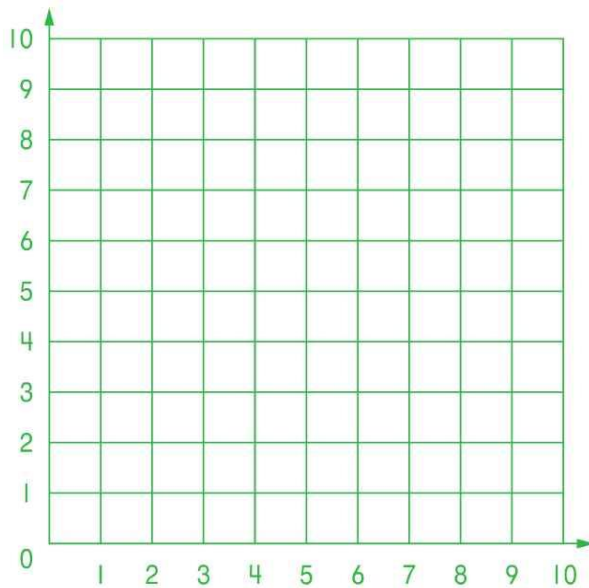
9

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.



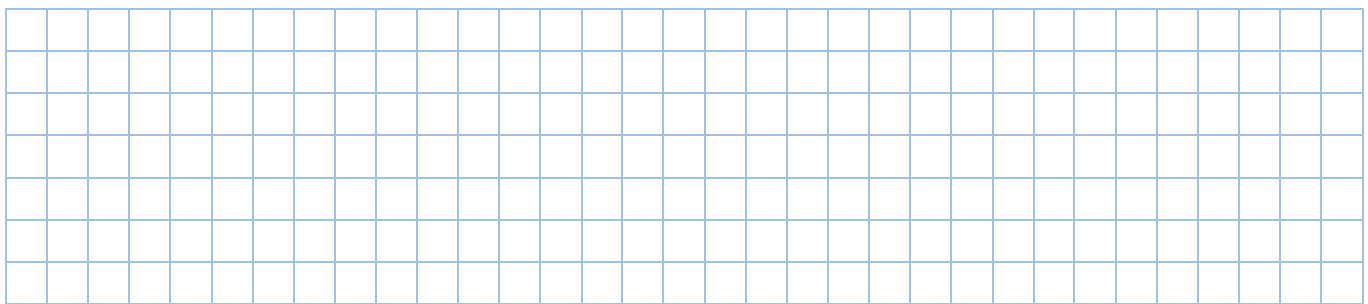
10

Calculate:

$$38 \times 7 =$$

$$107 \times 7 =$$

$$611 \times 7 =$$



11

Open the parentheses and calculate where possible:

$$123 - (12 + 15) =$$

$$218 - (b - c) =$$

$$n + (a + b - c) =$$

$$145 - (s + w - 18) =$$

$$6(45 - 17) =$$

$$7(80 - a) =$$

Lesson 24 Distributive property of multiplication. Expanding parentheses.

$$n \times (a \times b) = \underline{\hspace{2cm}}$$

$$145 - (s + w - 18) = \underline{\hspace{2cm}}$$