

Please complete any purple marking first.

Recap:

On your whiteboards, try to solve this expression:

$$4 \times (1 + 3) + 3 \times 3 =$$

Explain how you solved it to your partners.

Brackets
Indices
Division
Multiplication
Addition
Subtraction

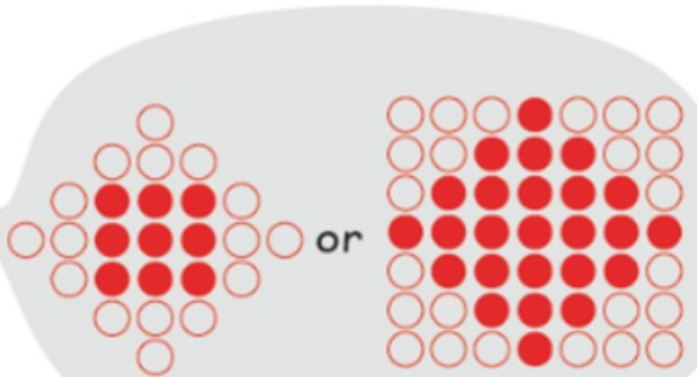


12/09/2019

WALT understand the order of operations used to carry out calculations.

In Focus

Other than by counting, how can we tell the number of ● in the diagram?



Use your own counters or draw it out.

Challenge:

Write a number sentence to represent the diagram?

How many ways can you represent the diagram using number sentences?

1



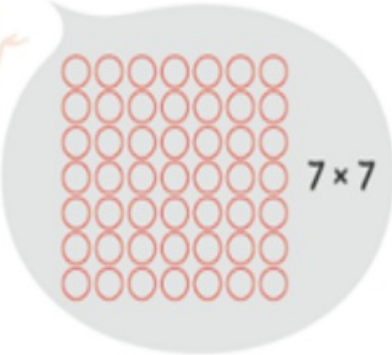
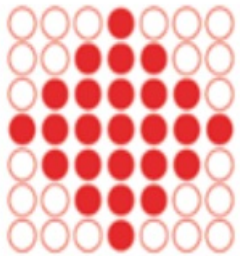
This is an expression.

$$4 \times (1 + 3) + 3 \times 3 = 25$$

TTYP: What has Maira done?

TTYP: Is there a number sentence (expression) that Maira could use to find out how many counters there are overall?

2



This expression describes the method.



$$7 \times 7 - 4 \times (1 + 2 + 3) = 25$$

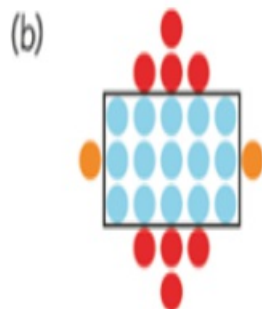
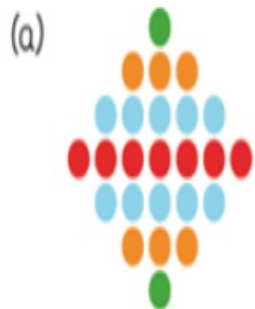


TTYP: What has Rebecca done to calculate the amount of red dots?

TTYP: Is there a number sentence (expression) that Rebecca could use to find out how many red counters there are overall?

Guided Practice

1 Write an expression to describe the way the number of dots is calculated.



Challenge:
Write down a number sentence that will allow you to work out the total number of blue counters.

2 Find the value of each expression.

(a) $5 + 4 + 3 \times 2 + 1 =$

Do the multiplication before you do the addition.



Add from left to right.

(b) $5 + (4 + 3) \times 2 + 1 =$

Do the calculation in () before you do the multiplication.



(c) $5 + 4 + 3 - 2 + 1 =$

For addition and subtraction, calculate from left to right...

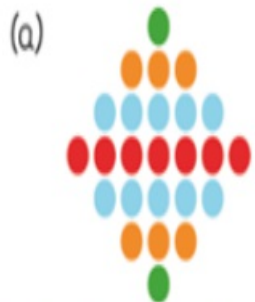


(d) $(5 + 4 + 3) - (2 + 1) =$

if there are (), do the calculations in each () first.

Guided Practice

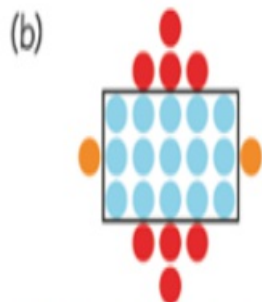
1 Write an expression to describe the way the number of dots is calculated.



$$7 + 2 \times 5 + 2 \times 3 + 2 \times 1 = 25$$



2 ones, 2 threes,
2 fives and 1 seven



$$3 \times 5 + 2 \times 4 + 2 \times 1 = 25$$

2 ones, 2
and the rectangle



2 Find the value of each expression.

(a) $5 + 4 + 3 \times 2 + 1 = 16$

Do the multiplication
before you do the
addition.



Add from left
to right.

(b) $5 + (4 + 3) \times 2 + 1 = 20$

Do the calculation in () before you
do the multiplication.



(c) $5 + 4 + 3 - 2 + 1 = 11$

For addition and
subtraction, calculate
from left to right...



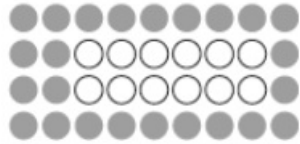
(d) $(5 + 4 + 3) - (2 + 1) = 9$

if there are (),
do the calculations
in each () first.

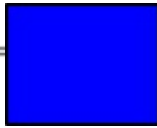
Worksheet 1 - Pg.17-18

Using Mixed Operations

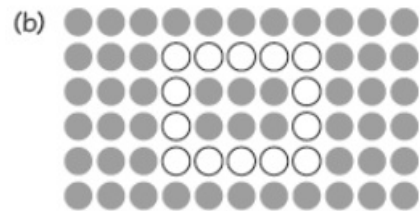
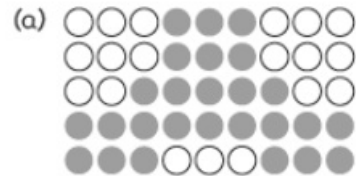
1 This is how Emma finds the number of shaded dots.



$$9 \times 4 - 6 \times 2 =$$

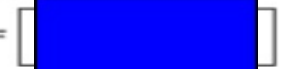


Write an expression using Emma's method to find the number of shaded dots.



2 Find the value of each expression.

(a) $2 + 3 - 4 + 5 =$



(b) $2 \times 3 + 4 - 5 =$



(c) $(2 + 3) \times 4 - 5 =$



(d) $2 \times 4 - 3 + 5 =$



(e) $5 - 4 + 3 - 2 + 1 =$



(f) $5 - 4 + 3 - (2 + 1) =$



(g) $9 + 8 - 7 + 6 =$



(h) $9 + 8 - (7 + 6) =$



(i) $9 \times 8 - 7 \times 6 =$



(j) $10 + 9 - (8 - 7) \times 6 =$



(k) $9 + 2 \times 3 - 8 + 7 =$



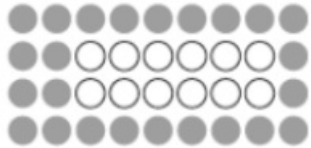
(l) $9 - (1 + 7) - (6 - 5) =$



Worksheet 1 - Pg.17-18

Using Mixed Operations

1 This is how Emma finds the number of shaded dots.



$$9 \times 4 - 6 \times 2 = \boxed{24}$$

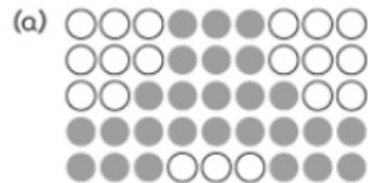


$$9 \times 4 = \boxed{36}$$

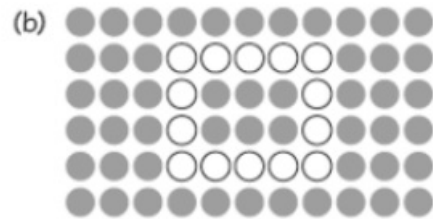
$$6 \times 2 = \boxed{12}$$

$$\boxed{36} - \boxed{12} = \boxed{24}$$

Write an expression using Emma's method to find the number of shaded dots.



$$9 \times 5 - 3 \times 5 - 2 \times 2 = 26$$



$$11 \times 6 - 7 \times 2 = 52$$

2 Find the value of each expression.

(a) $2 + 3 - 4 + 5 = \boxed{6}$

(b) $2 \times 3 + 4 - 5 = \boxed{5}$

(c) $(2 + 3) \times 4 - 5 = \boxed{15}$

(d) $2 \times 4 - 3 + 5 = \boxed{10}$

(e) $5 - 4 + 3 - 2 + 1 = \boxed{3}$

(f) $5 - 4 + 3 - (2 + 1) = \boxed{1}$

(g) $9 + 8 - 7 + 6 = \boxed{16}$

(h) $9 + 8 - (7 + 6) = \boxed{4}$

(i) $9 \times 8 - 7 \times 6 = \boxed{30}$

(j) $10 + 9 - (8 - 7) \times 6 = \boxed{13}$

(k) $9 + 2 \times 3 - 8 + 7 = \boxed{14}$

(l) $9 - (1 + 7) - (6 - 5) = \boxed{0}$

Challenge

Here are five number cards.

$$\frac{1}{2}$$

$$1\frac{1}{2}$$

$$2$$

$$2\frac{1}{2}$$

$$3\frac{1}{2}$$

Use **three** of the number cards to make this calculation correct.

$$\left(\square + \square \right) \times \square = 10$$

Challenge:

Create your own multi-operation question using some of these number cards