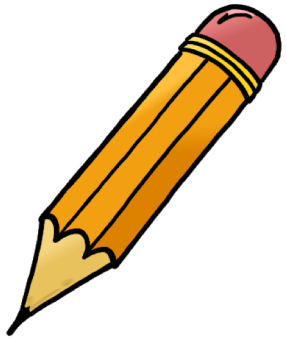
Year 6

Thursday 18th June 2020

Maths

LO: to solve simple one step equations



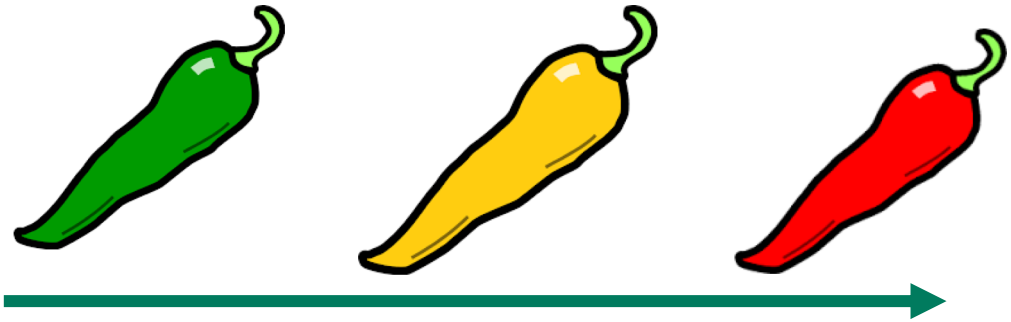
The video of this lesson is available here – Summer Term – Week 7 - lesson 4

This link works on the printable version and is available above the PowerPoint.

You will need to watch this video to learn the skills you need in this lesson.

The independent work continues on the next two slides. There are 6 questions and 1 extension.

(Espanol – siete preguntas y una extensión)



The chili suggests a good starting point.

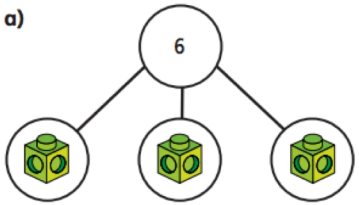
If you have time you can complete all the independent work!

Solve simple one-step equations

1 Write an equation for each part-whole model.

Work out the value of the multilink cube in each equation.

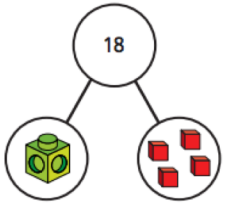
a)



_____

= ☐

b)



_____

= ☐

2 There are some counters under the cup.

There are 10 counters in total.

a) If c is the number of counters under the cup, explain why $c + 6 = 10$

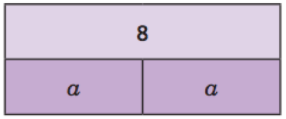
b) Work out the value of c. $c =$ ☐

c) How many counters are under the cup? ☐

3 Write algebraic equations to represent the bar models.

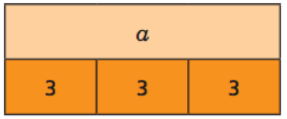
Find the value of a in each one.

a)



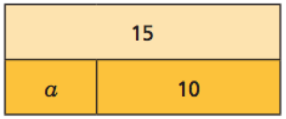
$a =$ ☐

c)



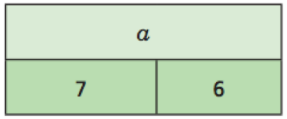
$a =$ ☐

b)



$a =$ ☐

d)



$a =$ ☐

4 Nijah is solving the equation $x - 8 = 20$

$x - 8 = 20$

$x = 20 - 8$

$x = 12$

What mistake has Nijah made?

_____

_____

5 Solve the equations.

a) $x + 7 = 20$

$x =$ ☐

b) $10y = 80$

$y =$ ☐

c) $4m = 22$

$m =$ ☐

d) $g - 3 = 15$

$g =$ ☐

e) $32 = t - 5$

$t =$ ☐

f) $\frac{u}{6} = 3$

$u =$ ☐

6 Filip thinks of a number.

He subtracts 5 from his number.

He ends up with 10

Write an algebraic equation to represent Filip's problem.

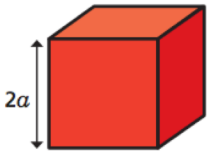
Solve the equation to work out his number.

☐

7 Dexter builds a tower.

Each block is $2a$ high.

He uses 7 blocks.



The total height of his tower is 42 cm.

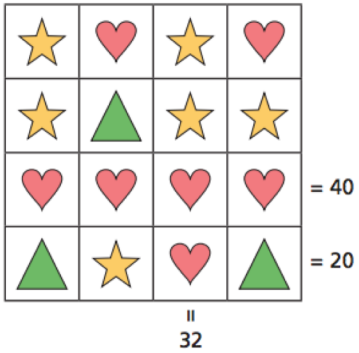
Write an equation to represent the height of Dexter's tower and find the value of a.

$a =$ ☐ cm

Ext:

Work out the value of each shape.

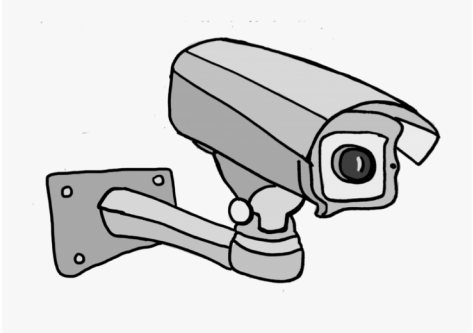
Write the equations that you solved to find the value of each shape.

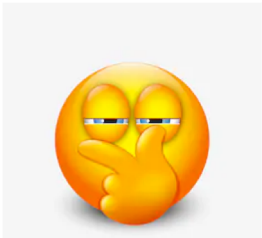


♥ = ☐ ★ = ☐ ▲ = ☐

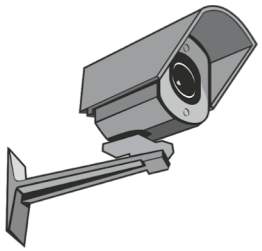
Work out the missing total of each row and column.

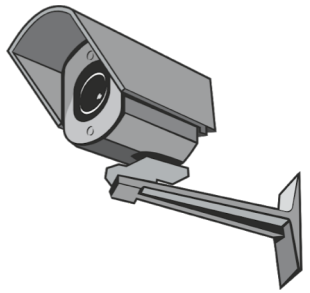
Compare answers with a partner.





The next two slides contain the answers should you wish to check you work and reflect on what you understand.



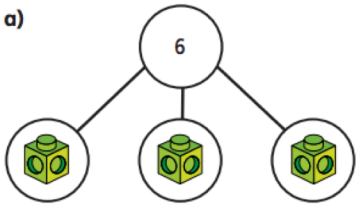


Solve simple one-step equations

1 Write an equation for each part-whole model.

Work out the value of the multilink cube in each equation.

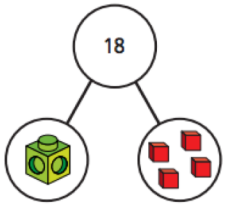
a)



$3c = 6$

= 2

b)



$x + 4 = 18$

= 14

2 There are some counters under the cup.

There are 10 counters in total.

a) If c is the number of counters under the cup, explain why $c + 6 = 10$

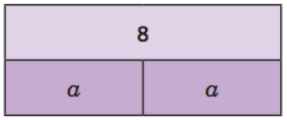
b) Work out the value of c. $c =$ 4

c) How many counters are under the cup? 4

3 Write algebraic equations to represent the bar models.

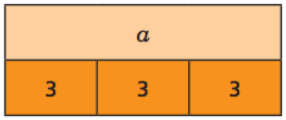
Find the value of a in each one.

a)



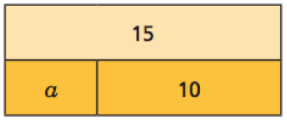
$a =$ 4

c)



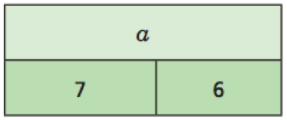
$a =$ 9

b)



$a =$ 5

d)



$a =$ 13

4 Nijah is solving the equation $x - 8 = 20$

$x - 8 = 20$

$x = 20 - 8$

$x = 12$

What mistake has Nijah made?

She should have added 8 to 20

$x = 28$

5 Solve the equations.

a) $x + 7 = 20$

$x =$ 13

b) $10y = 80$

$y =$ 8

c) $4m = 22$

$m =$ 5·5

d) $g - 3 = 15$

$g =$ 18

e) $32 = t - 5$

$t =$ 37

f) $\frac{u}{6} = 3$

$u =$ 18

6 Filip thinks of a number.

He subtracts 5 from his number.

He ends up with 10

Write an algebraic equation to represent Filip's problem.

$x - 5 = 10$

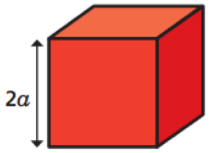
Solve the equation to work out his number.

15

7 Dexter builds a tower.

Each block is $2a$ high.

He uses 7 blocks.



The total height of his tower is 42 cm.

Write an equation to represent the height of Dexter's tower and find the value of a.

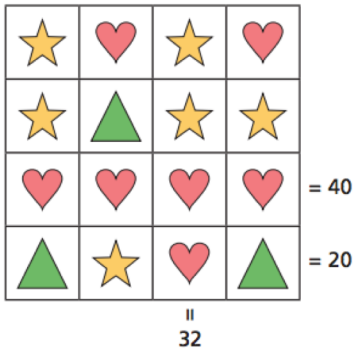
$14a = 42$

$a =$ 3 cm

Ext:

Work out the value of each shape.

Write the equations that you solved to find the value of each shape.



♥ = 10 ★ = 6 ▲ = 2

Work out the missing total of each row and column.

Compare answers with a partner.