

Parent Forum Maths Meeting

March 2017

Writing expressions
Collecting like terms
Substitution
Equations

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How do we teach the topics?

Have a go.....

Can you spot the errors?

Writing expressions

- Expression can be made from everyday life situations such as:
- Prices in a café
- Ticket prices at theme parks
- Amount of sweets someone has in their pocket

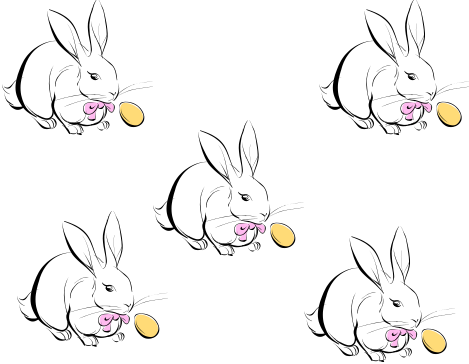
Writing expressions

- Bob has some sweets in his pocket
- We can now say that Bob has 's' sweets as we do not know the actual amount.
- What if Bob eats 4 of his sweets?
- As we don't know the amount of sweets he actually had to begin with we write an expression: $s - 4$

Simplifying expressions

- **Expression**
- involves numbers and letters eg $4a+b$
- **Simplify**
- means make the expression shorter or easier

Forming expressions from pictures



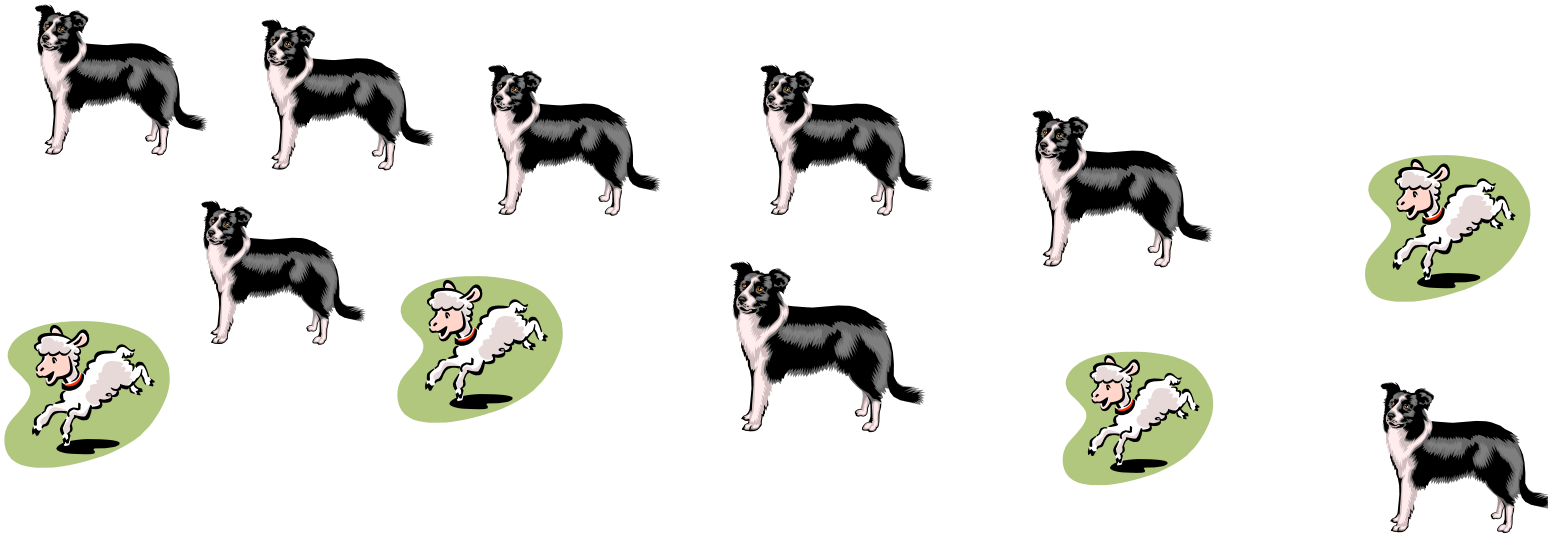
There are 5 rabbits here, so we can write $r + r + r + r + r$

This is the same as 5 lots of rabbits so we can write

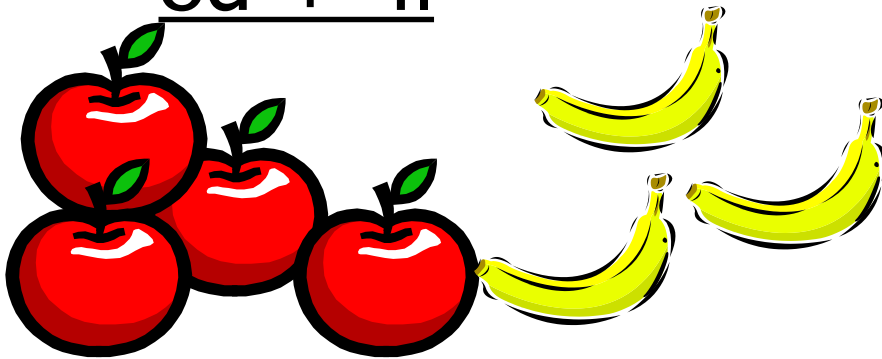
$$5 \times r$$

But we do not write the times sign because it looks like an 'x' so we can say $5r$

Collecting like terms

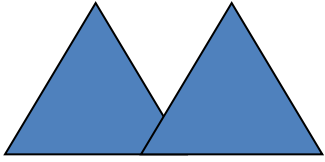


$$d + d + d + d + d + d + d + d + l + l + l + l$$
$$= \underline{8d + 4l}$$

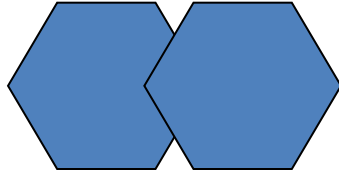


$$\underline{5a + 3b}$$

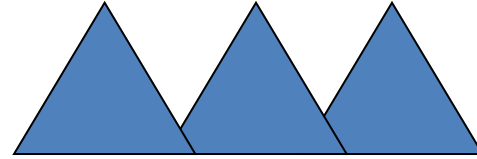
Collecting like terms



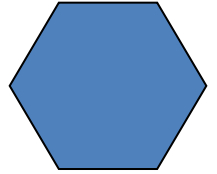
$2t$



$+ 2h$



$+ 3t$



$+ h$

$5t + 3h$

Substitution

- **Substitution**
- means that a letter is replaced with a number

Substitution

- $4t - 1$
- Find the value of the expression when: $t = 2$
- $4t - 1$
- $(4 \times 2) - 1$
- $8 - 1$
- 7

Exercise

Find the answers to the following questions using $a=5$,
 $b=3$ and $c=2$.

- 1) $a + b$
- 2) $2a$
- 3) $b - c$
- 4) $a + 2c$
- 5) $b + c$
- 6) $2b + a$
- 7) $ac + b$
- 8) $7a + 3$
- 9) $6b - 5a$
- 10) $a + b - c$

Equations

Solve

$$n + 5 = 14$$

$$n + \cancel{5} - \cancel{5} = 14 - 5$$

$$n = 9$$

Substitute your answer back into the equation to see if you're correct.....

Equations

Solve

$$n - 5 = 19$$

Add 5 to both sides

$$n - \cancel{5} + \cancel{5} = 19 + 5$$

$$n = 24$$

Substitute your answer back into the equation to see if you're correct.....

Equations

Solve

$$4m + 1 = 21$$

$$4m + \cancel{1} - \cancel{1} = 21 - 1$$

$$4m = 20$$

$$4m \div 4 = 20 \div 4$$

$$\underline{m = 5}$$

Equations

Solve

$$4x - 3 = 5$$

$$4x - \cancel{3} + \cancel{3} = 5 + 3$$

$$4x = 8$$

$$4x \div 4 = 8 \div 4$$

$$\underline{x = 2}$$

In the table below there are pairs of expressions that are equivalent. Match them.

$n + n$	$n \times n$
$n \div 3$	$4n$
$2n + 3$	$3 \times n$
n^2	$3 + n + n$
$2n + 2n$	n
$5n - 4n$	$2n$
$3n$	$\frac{n}{3}$

$$n + n = 2n$$

$$n \div 3 = \frac{n}{3}$$

$$2n + 3 = 3 + n + n$$

$$n^2 = n \times n$$

$$2n + 2n = 4n$$

$$5n - 4n = n$$

$$3n = 3 \times n$$

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On behalf of the Maths department,
thank you for attending and participating!!!!

Any questions?????

Substitution 'Magic Square'

Prove whether or not this is a magic square.

z	$x + y$	$2x$
$3x$	5	1
y	x	$2y$

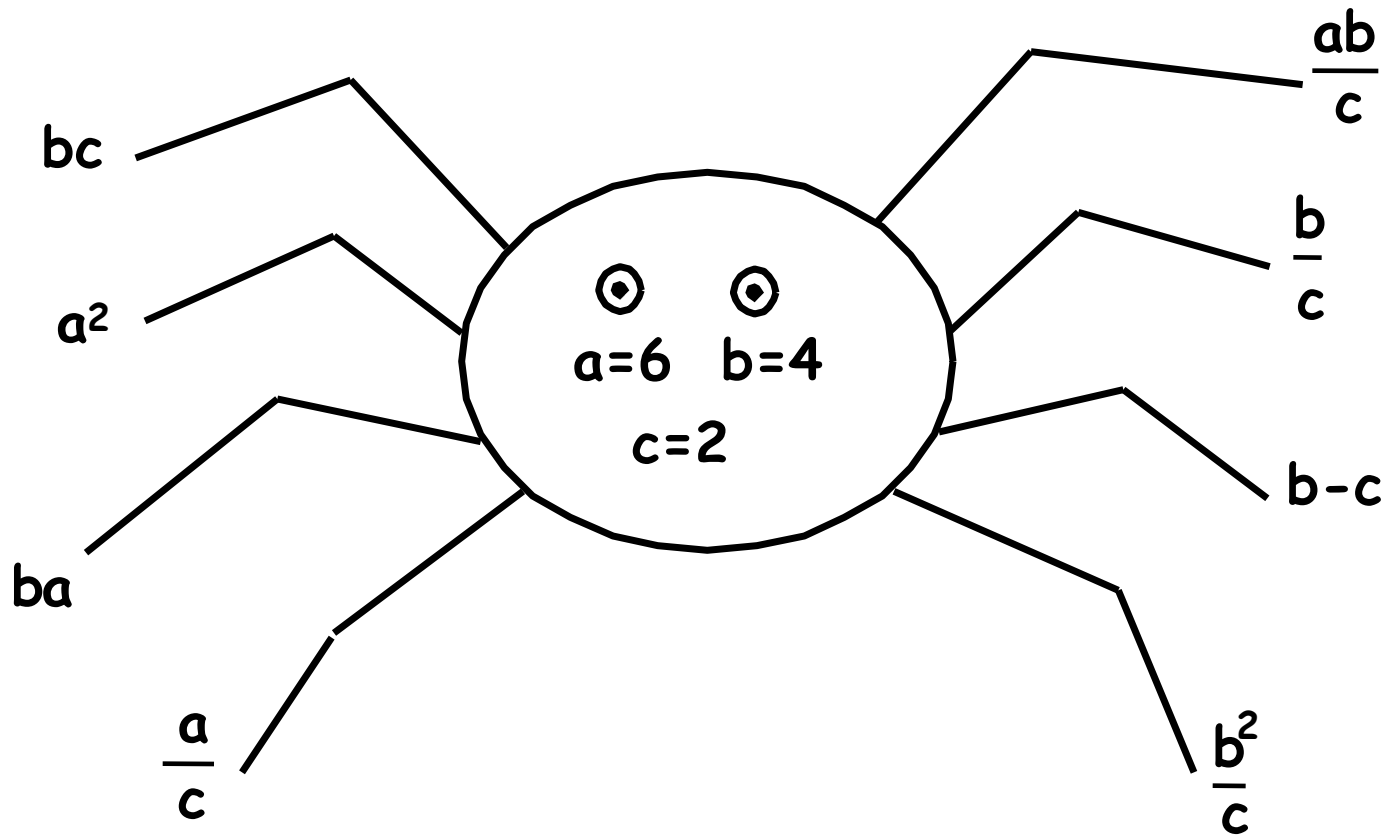
$$x = 3$$

$$y = 4$$

$$z = 2$$

$$\text{Line total} = 15$$

Substitution



In the table below there are pairs of expressions that are equivalent. Match them.

$n + n$	$n \times n$
$n \div 3$	$4n$
$2n + 3$	$3 \times n$
n^2	$3 + n + n$
$2n + 2n$	n
$5n - 4n$	$2n$
$3n$	$\frac{n}{3}$