

- 1 The counters show  $2g + 3g$ .

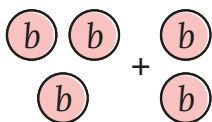


$$2g + 3g = 5g$$

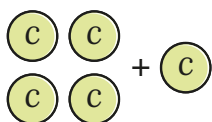
Complete the statements to match the counters.

a) 

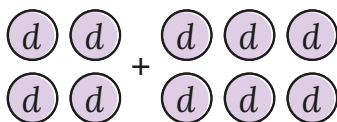
$$a + a + a = \boxed{\phantom{000}}$$

b) 

$$3b + 2b = \boxed{\phantom{000}}$$

c) 

$$\boxed{\phantom{000}} + \boxed{\phantom{000}} = \boxed{\phantom{000}}$$

d) 

$$\boxed{\phantom{000}} + \boxed{\phantom{000}} = \boxed{\phantom{000}}$$

What do you notice?



**2**

Match the expressions.

The first one has been done for you.

$a + a + a$	$9a$
$3a + 2a$	$10a$
$a + 5a$	$5a$
$2a + 7a$	$6a$
$9a + a$	$3a$

**3**

Simplify the expressions.

a)  $2f + 3f =$

b)  $6j + 2j =$

c)  $4k + k =$

d)  $w + 7w =$

e)  $2b + 3b + 5b =$

f)  $6y + y + 3y =$

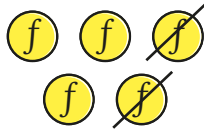
g)  $7m + m + m =$

h)  $2a + 9a + a =$

i)  $27p + 73p =$

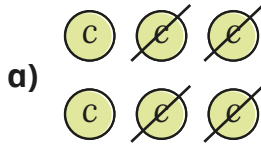
j)  $50h + 49h + h =$

4

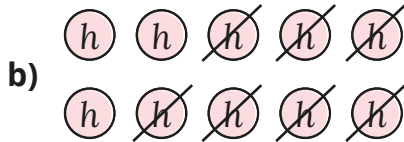
The counters show  $5f - 2f$ .

$$5f - 2f = 3f$$

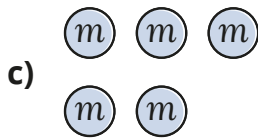
Complete the statements. You may use the counters to help you.



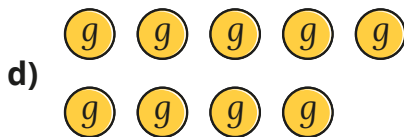
$$6c - 4c = \boxed{\phantom{00}}$$



$$10h - 7h = \boxed{\phantom{00}}$$



$$5m - 3m = \boxed{\phantom{00}}$$



$$9g - 2g = \boxed{\phantom{00}}$$

5

Simplify the expressions.

a)  $5x - 2x = \boxed{\phantom{00}}$

d)  $7u - u = \boxed{\phantom{00}}$

b)  $6n - 4n = \boxed{\phantom{00}}$

e)  $20m - 3m = \boxed{\phantom{00}}$

c)  $9g - 8g = \boxed{\phantom{00}}$

f)  $30y - 29y = \boxed{\phantom{00}}$



6 Tommy is simplifying  $4t + 3t - 2t$ .

$$\begin{array}{c} 4t + 3t - 2t = 7t - 2t = 5t \\ \underbrace{\hspace{1.5cm}} \\ 7t \end{array}$$

Use Tommy's method to simplify the expressions.

a)  $4n + 6n - 2n$

c)  $10p - 8p + 3p$

b)  $11k + 4k - 12k$

d)  $14r - r - 3r$

7 Mo is trying to simplify an expression.

$$3m + 5m - 2m = 10m$$

a) What mistake has Mo made?

b) Work out the correct answer.



8

Simplify the expressions.

a)  $7c + 2c + 3c$

c)  $7c - 2c + 3c$

b)  $7c + 2c - 3c$

d)  $7c - 2c - 3c$

9

The counters show the expression  $3x + 4y + x + 5y$ .

Tommy rearranges the counters.



Use Tommy's counters to simplify the expression.

$$3x + 4y + x + 5y = \boxed{\phantom{00}}x + \boxed{\phantom{00}}y$$



10 Simplify the expressions.

a)  $3p + 2p + 8r + 3r$

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b)  $9f + 5g + 2f + 6g$

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c)  $8j + 9x + x + j$

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d)  $8h + 9k + 2h - 2k$

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11 Explain why  $4a + 2b$  cannot be simplified.

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12 Circle the expressions that **cannot** be simplified.

$3a - a$

$2f + 13f$

$7g + 5h$

$2k + k$

$3n + 8m$