
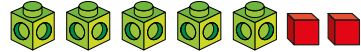




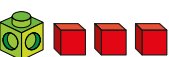




1 Tommy uses multilink cubes to represent an unknown number and base ten ones to represent 1



Write algebraic expressions to describe the sets of cubes.

The first one has been done for you.

a)  $2x + 3$	f) 
b) 	g) 
c) 	h) 
d) 	
e) 	

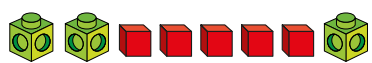
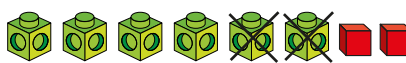
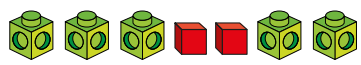
2 Use Tommy's method to represent these expressions.

- a)  $x + 2$       b)  $2x$       c)  $3x + 1$       d)  $x + 6$

Compare answers with a partner.

3 Use cubes to help you simplify the following expressions.

The first one has been done for you.

a) $2y + 5 + y = 3y + 5$	c) $6p + 2 - 2p$
	
b) $3a + 2 + a + a$	
	
d) $m + 4 + 3m - 3$	

4 Complete the function machines.

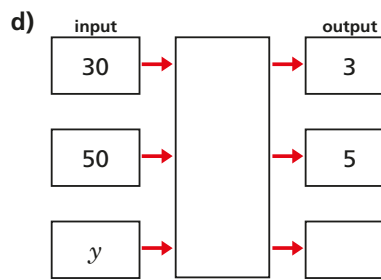
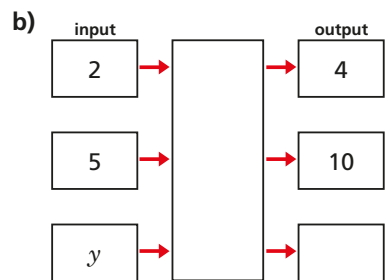
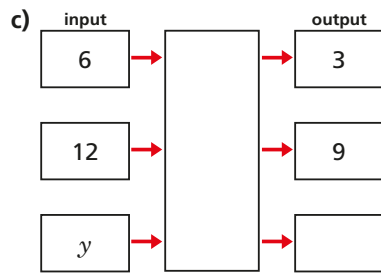
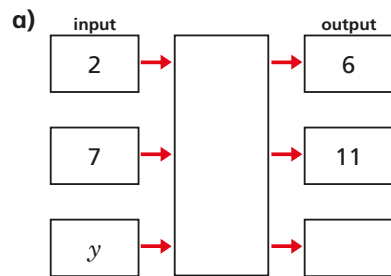
a) <table border="1" style="display: inline-table; vertical-align: top;"> <tr><td>input</td><td></td><td>output</td></tr> <tr><td>2</td><td>→</td><td>6</td></tr> <tr><td>7</td><td>→</td><td>11</td></tr> <tr><td><math>y</math></td><td>→</td><td></td></tr> </table>	input		output	2	→	6	7	→	11	$y$	→		c) <table border="1" style="display: inline-table; vertical-align: top;"> <tr><td>input</td><td></td><td>output</td></tr> <tr><td>6</td><td>→</td><td>3</td></tr> <tr><td>12</td><td>→</td><td>9</td></tr> <tr><td><math>y</math></td><td>→</td><td></td></tr> </table>	input		output	6	→	3	12	→	9	$y$	→	
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5 Match each statement to the equivalent algebraic expression.

Write the missing statements.

5 more than $y$	$2y$
$y$ less than 5	$y - 5$
$y$ multiplied by 5	$5 - y$
$y$ divided by 5	$y + 5$
double $y$	$5y$
	$y^2$
	$\frac{y}{5}$

4 Complete the function machines.



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Write the missing statements.

5 more than  $y$

$y$  less than 5

$y$  multiplied by 5

$y$  divided by 5

double  $y$

$2y$

$y - 5$

$5 - y$

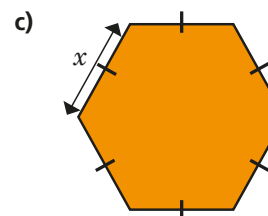
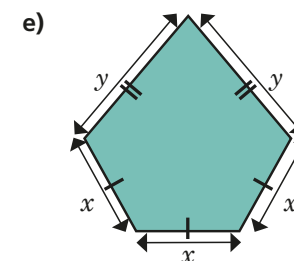
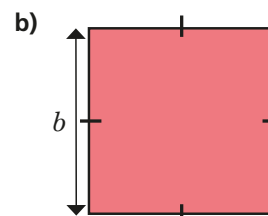
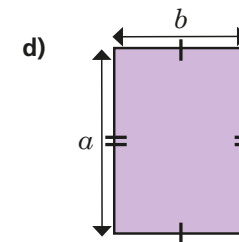
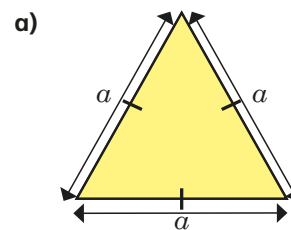
$y + 5$

$5y$

$y^2$

$\frac{y}{5}$

6 Write an algebraic expression to represent the perimeter of each shape.



7 Complete the bar models.

