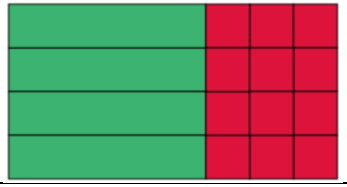
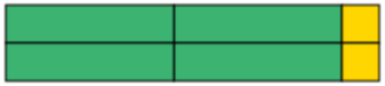
Factorising Single Brackets

Pictorial Stage

1 Complete the table below. Use a set of Algebra Tiles to help you. An example has been done for you.

Expression	HCF	Diagram	Height of Diagram	Length of Diagram	Factorised Expression
$2x + 6$	HCF of 2x and 6 is 2		2	x + 3	2(x + 3)
$2x + 8$					
$2x + 12$					
$3x + 12$			3		
$4x + 12$					
$4x - 12$	HCF of $4x$ and -12 is 4				
$12 - 4x$			4		
$12 - 6x$					

2 Complete the table below. Use a set of Algebra Tiles to help you.
An example has been done for you.

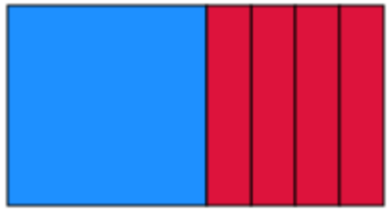
Expression	HCF	Diagram	Height of Diagram	Length of Diagram	Factorised Expression
$4x + 6$	HCF of 4x and 6 is 2		2	2x + 3	2(2x + 3)
$4x + 2$				2x + 1	
$6x + 3$					
$6x + 9$					
$9x + 6$					
$9x - 6$					
$9x - 3$					

3 The diagram represents the expression $x^2 + 4x$.

a) What is the height of the diagram?
b) What is the length of the diagram?
c) Use your answers to parts a) and b) to complete the factorisation below.

$$x^2 + 4x = \square(\square x + \square)$$

4 The diagram represents the expression $x^2 - 4x$.



a) What is the height of the diagram?
b) What is the length of the diagram?
c) Use your answers to parts a) and b) to complete the factorisation below.

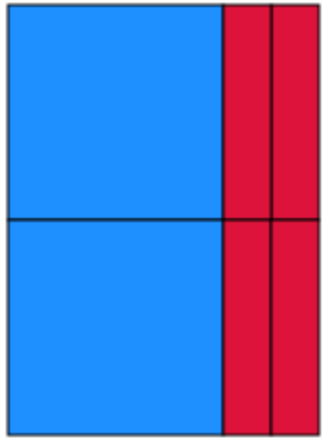
$$x^2 - 4x = \square(\square x - \square)$$

5 The diagram represents the expression $2x^2 - 5x$.

a) What is the height of the diagram?
b) What is the length of the diagram?
c) Use your answers to parts a) and b) to complete the factorisation below.

$$2x^2 - 5x = \square(\square x - \square)$$

6 The diagram represents the expression $2x^2 - 5x$.



a) What is the height of the diagram?
b) What is the length of the diagram?
c) Use your answers to parts a) and b) to complete the factorisation below.

$$2x^2 - 4x = \square(\square x - \square)$$