**Algebra and Shape GREEN**

1. The perimeter of this rectangle is $31$ cm.

Find the value of $x$.

$x=$ \_\_\_\_\_\_\_\_\_ cm

2. The perimeter of this shape is $29$ cm.

 What is $x$?

$x=$ \_\_\_\_\_\_\_\_\_ cm

3. A rectangle has the lengths shown.

Find the perimeter of the rectangle.

Perimeter = \_\_\_\_\_\_\_\_\_ cm

4. The area of the right-angled triangle is equal to the area of the rectangle.

Work out the value of $x$.

$x=$ \_\_\_\_\_\_\_\_\_ cm

5. The diagram shows a right-angled triangle.

 Calculate the value of $x$.

$x=$ \_\_\_\_\_\_\_\_\_ º

6. The area of this compound shape is $59$ cm².

a) Find the value of $x$.

$x=$ \_\_\_\_\_\_\_\_\_ cm

b) Hence calculate the perimeter of the shape.

\_\_\_\_\_\_\_\_\_ cm

**Algebra and Shape AMBER**

1. The perimeter of this rectangle is $31$ cm.

Find the value of $x$.

Perimeter = total distance around the edge of the shape

$x=$ \_\_\_\_\_\_\_\_\_ cm

2. The perimeter of this shape is $29$ cm.

 What is $x$?

$x=$ \_\_\_\_\_\_\_\_\_ cm

3. A rectangle has the lengths shown.

Find the perimeter of the rectangle.

Use the fact that opposite sides of a rectangle are equal

Perimeter = \_\_\_\_\_\_\_\_\_ cm

4. The area of the right-angled triangle is equal to the area of the rectangle.

Work out the value of $x$.

Start by calculating the area of the triangle

$x=$ \_\_\_\_\_\_\_\_\_ cm

5. The diagram shows a right-angled triangle.

 Calculate the value of $x$.

What do angles in a triangle sum to?

$x=$ \_\_\_\_\_\_\_\_\_ º

6. The area of this compound shape is $59$ cm².

a) Find the value of $x$.

Split the shape into two rectangles!

$x=$ \_\_\_\_\_\_\_\_\_ cm

b) Hence calculate the perimeter of the shape.

\_\_\_\_\_\_\_\_\_ cm

**Algebra and Shape RED**

1. The perimeter of this rectangle is $31$ cm.

Find the value of $x$.

Perimeter = total distance around the edge of the shape

 $3x-2+2x+3x-2+2x=31$

$x=$ \_\_\_\_\_\_\_\_\_ cm

2. The perimeter of this shape is $29$ cm.

 What is $x$?

 $x-2+2x+x+3=29$

$x=$ \_\_\_\_\_\_\_\_\_ cm

3. A rectangle has the lengths shown.

Find the perimeter of the rectangle.

Use the fact that opposite sides of a rectangle are equal

 $3y-1=2y+8$ (solve this!)

Perimeter = \_\_\_\_\_\_\_\_\_ cm

4. The area of the right-angled triangle is equal to the area of the rectangle.

Work out the value of $x$.

Start by calculating the area of the triangle

 $\frac{1}{2}×15×20=$

$x=$ \_\_\_\_\_\_\_\_\_ cm

5. The diagram shows a right-angled triangle.

 Calculate the value of $x$.

What do angles in a triangle sum to?

 $90+3x+16+2x+14=$

$x=$ \_\_\_\_\_\_\_\_\_ º

6. The area of this compound shape is $59$ cm².

a) Find the value of $x$.

Split the shape into two rectangles!

$x=$ \_\_\_\_\_\_\_\_\_ cm

b) Hence calculate the perimeter of the shape.

\_\_\_\_\_\_\_\_\_ cm