

**LO: To solve problems involving finding missing values (bronze).**

1)

Class 6 are trying to solve a number puzzle.

$$\triangle + \triangle + \circ = 10$$

a)



Dexter

The triangle could be 3 and the circle could be 4

Do you agree with Dexter? \_\_\_\_\_

Explain why.

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b)

The triangle is worth 4



Dora

What is the value of the circle in Dora's number puzzle?



$$\circ = \square$$

2)

Here is an equation.

$$\circ + \square = 12$$

Find six possible pairs of values for the circle and square.

3)

Work out the value of each shape:

$$\square + \square + \triangle = 21$$

$$\triangle + \triangle + \circ = 20$$

$$\square + \circ + \square = 26$$

**LO: To solve problems involving finding missing values (silver).**

1) Work out the value of each shape:

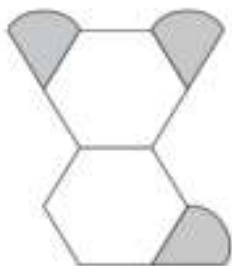
$$\square + \square - \triangle = 7$$

$$\triangle \times \triangle - \bigcirc = 117$$

$$\square + \bigcirc - \square = 4$$

2) Amina is making designs with two different shapes.  
She gives each shape a value.

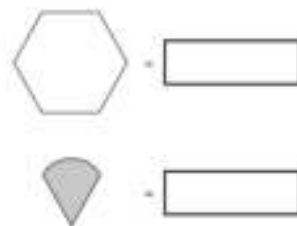
Calculate the value of each shape.



Total value is 147



Total value is 111



3)



Value = 263



Value = 206



4) Rosie has three number cards.



- The sum of the cards is 12
- $x$  is greater than  $y$  and  $y$  is greater than  $z$ .
- All the numbers are greater than zero.

List all the possible values of  $x$ ,  $y$  and  $z$ .

$x$							
$y$							
$z$							

**LO: To solve problems involving finding missing values (gold).**

1) Work out the value of each shape:

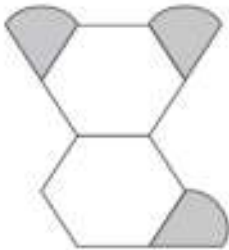
$$\text{Blue Rectangle} \times \text{Blue Rectangle} \div \text{Yellow Triangle} = 20$$

$$\text{Yellow Triangle} \times \text{Yellow Triangle} + \text{Purple Oval} = 33$$

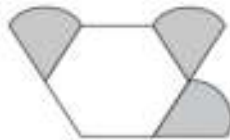
$$\text{Blue Rectangle} - \text{Purple Oval} + \text{Blue Rectangle} = 12$$

2) Amina is making designs with two different shapes.  
She gives each shape a value.

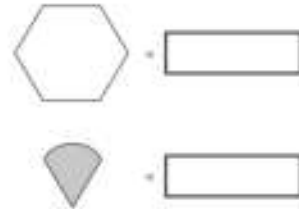
Calculate the value of each shape.






Total value is 147




Total value is 111



3)  $p$  and  $q$  each stand for whole numbers.  $p + q = 1000$  and  $p$  is 150 greater than  $q$ . Work out the values of  $p$  and  $q$ .

4)  and  each stand for a different number.  = 34

$$\text{Grey Square} + \text{Grey Square} = \text{Grey Circle} + \text{Grey Circle} + \text{Grey Square}$$

What is the value of  ?

5)

$$2ab = 48$$

i) Find a pair of possible values for  $a$  and  $b$ .

$$a = \boxed{\phantom{00}}$$

$$b = \boxed{\phantom{00}}$$

LO: To solve problems involving finding missing values (bronze)-answers.

1)

a) Yes, because  $3 + 3 + 4 = 10$


b) Circle = 2

2) Answers will vary

3)

 = 8

 = 5

 = 10

**LO: To solve problems involving finding missing values (silver)-answers.**

1)

 = 9

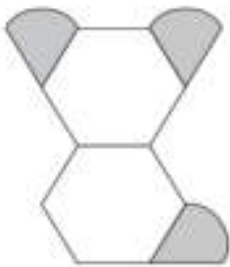
 = 11

 = 4

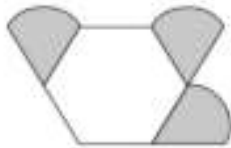
2)

Amina is making designs with two different shapes. She gives each shape a value.

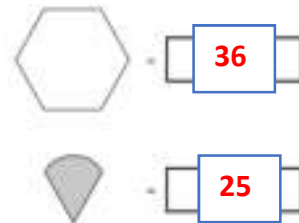
Calculate the value of each shape.



Total value is 147



Total value is 111



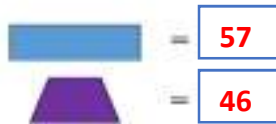
3)



Value = 263



Value = 206



4)

Rosie has three number cards.



- The sum of the cards is 12
- $x$  is greater than  $y$  and  $y$  is greater than  $z$ .
- All the numbers are greater than zero.

List all the possible values of  $x$ ,  $y$  and  $z$ .

$x$							
$y$							
$z$							

Answers will vary

**LO: To solve problems involving finding missing values (gold)-answers.**

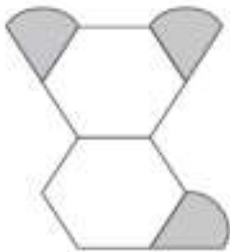
1)  = 10

 = 5

 = 8

2) Amina is making designs with two different shapes.  
She gives each shape a value.

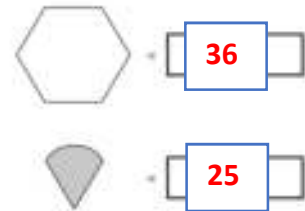
Calculate the value of each shape.






Total value is 147



Total value is 111



3)  $p$  and  $q$  each stand for whole numbers.  $p + q = 1000$  and  $p$  is 150 greater than  $q$ . Work out the values of  $p$  and  $q$ .  **$p = 575$   $q = 425$**

4)  and  each stand for a different number.  = 34

 +  =  +  + 

What is the value of  ? **17**

5)

$2ab = 48$

i) Find a pair of possible values for  $a$  and  $b$ .

Answers will vary

$a =$

$b =$