

# Year 2 and Year 3 Addition and Subtraction Unit 1 (23158)

## Additional teacher instructions for practice sheets

These notes indicate which practice sheets are most appropriate for which groups.

**Day 1 Y2 Addition and subtraction Sheet 1**

Working towards ARE

**Day 1 Y2 Addition and subtraction Sheet 2**

Working at ARE

**Day 1 Y2 Addition and subtraction Sheet 3**

Greater Depth

**Day 1 Y3 Balancing the scales Sheet 4**

Working towards ARE

**Day 1 Y3 Making 14 and 15 Sheet 5**

Working at ARE

**Day 1 Y3 Making 16, 17, 18, 19 and 20 Sheet 6**

Greater Depth

**Day 2 Y2 Pairs to 10 and 20 Sheet 1**

Working towards ARE

**Day 2 Y2 Pairs to 20 Sheet 2**

Working at ARE

**Day 2 Y2 Pairs to 20 Sheet 3**

Greater Depth

**Day 2 Y3 Multiples of 5: pairs to 100 Sheet 4**

Working towards ARE / Working at ARE / Greater Depth

Working towards ARE complete Set A using a 0-100 beaded line (see resources) for reference.

Working at ARE complete Set A then Set B. Use landmarked line (see resources) for reference for Set B.

Greater Depth complete Set A then Set B.

**Day 3 Y2 Pairs to 10 and 20 Sheet 1**

Working towards ARE

**Day 3 Y2 Pairs to 20 Sheet 2**

Working at ARE

# Year 2 and Year 3 Addition and Subtraction Unit 1 (23158)

## Additional teacher instructions for practice sheets continued

These notes indicate which practice sheets are most appropriate for which groups.

**Day 3 Y2 Missing numbers Sheet 3**  
Greater Depth

**Day 3 Y3 Missing numbers Sheet 4**  
Working towards ARE

**Day 3 Y3 Missing numbers Sheet 5**  
Working at ARE

**Day 3 Y3 Missing numbers Sheet 6**  
Greater Depth

**Day 4 Y2 Mystery numbers Sheet 1**  
Working towards ARE

**Day 4 Y2 Missing numbers Sheet 2**  
Working at ARE / Greater Depth

**Day 4 Y3 Triangles Sheet 3**  
Working towards ARE / Working at ARE

**Day 4 Y3 Triangles Sheet 4**  
Greater Depth

# Addition and Subtraction

## Sheet 1


Complete these bars. Draw new bricks in a different colour. The first one is done for you.

### Make 10


$5 + \boxed{5} = 10$  


$6 + \boxed{\phantom{00}} = 10$  

$7 + \boxed{\phantom{00}} = 10$  

$8 + \boxed{\phantom{00}} = 10$  

### Make 8

$3 + \boxed{\phantom{00}} = 8$  

$6 + \boxed{\phantom{00}} = 8$  

$7 + \boxed{\phantom{00}} = 8$  

### Make 9

$4 + \boxed{\phantom{00}} = 9$  

$6 + \boxed{\phantom{00}} = 9$  

$7 + \boxed{\phantom{00}} = 9$  

### Challenge

How many different ways can you make 10 using two numbers?

# Addition and Subtraction

## Sheet 2

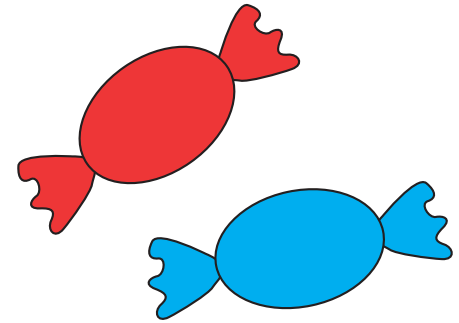
### At the sweet factory.

The sweet machine computer has broken down.

Tell the computer how many red and blue sweets to put in the bags.

Each bag has 10 sweets.

Make each bag have a different number of red and blue sweets.



6 + 4 = 10     +  = 10     +  = 10     +  = 10     +  = 10

+  = 10     +  = 10     +  = 10     +  = 10     +  = 10

### Challenge

The sweet factory fills bags with blue, red and yellow sweets. Show four different ways they do this. Remember each bag must have 10 sweets.

# Addition and Subtraction

## Sheet 3

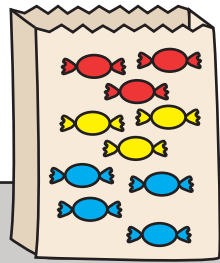
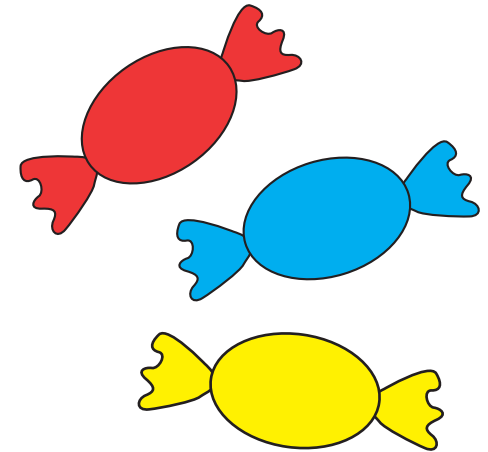
### At the sweet factory.

The sweet machine computer has broken down.

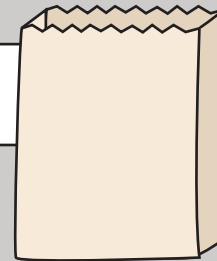
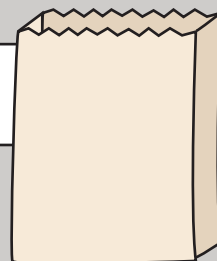
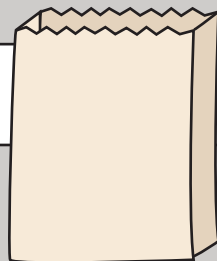
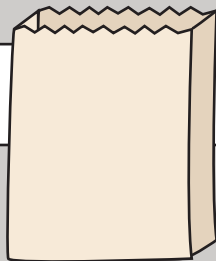
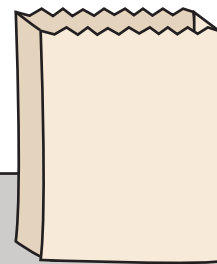
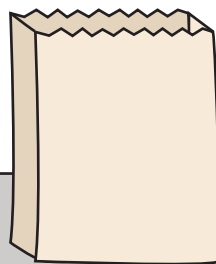
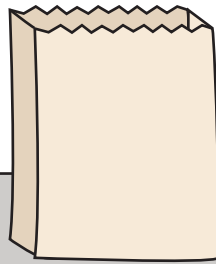
Tell the computer how many red, blue and yellow sweets to put in the bags.

Each bag has 10 sweets.

Make each bag have a different number of red, blue and yellow sweets.



$$3 + 3 + 4 = 10$$



### Challenge

In one bag there are red, blue, yellow and green sweets.

The number in each box is different. Can you work it out?

blue +

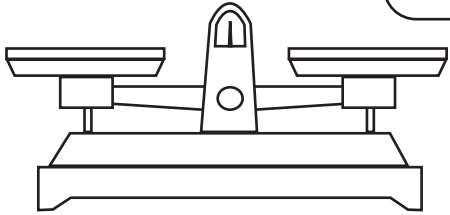
yellow +

red +

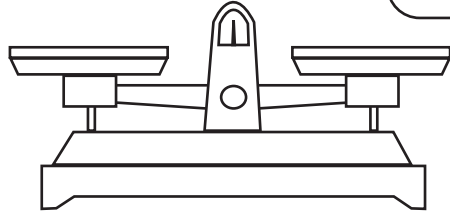
green = 10 sweets

**Balance the scales**  
Sheet 4

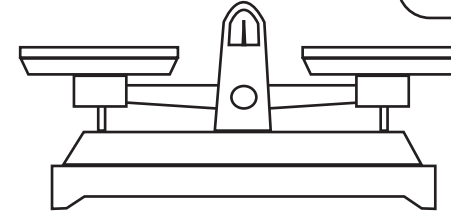
$$6 + 8 = 5 + \square$$



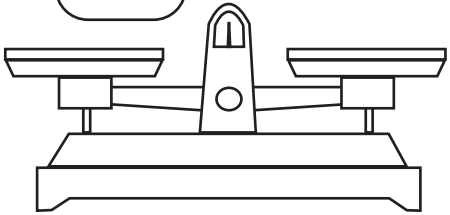
$$9 + 5 = 6 + \square$$



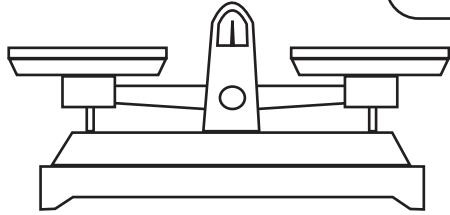
$$7 + 7 = 4 + \square$$



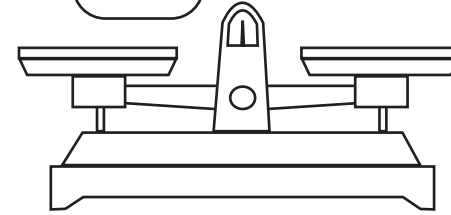
$$7 + \square = 8 + 6$$



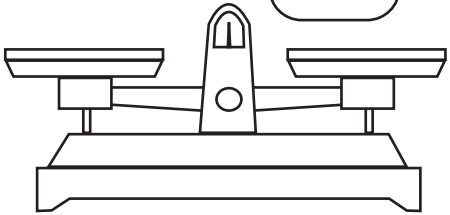
$$10 + 4 = 9 + \square$$



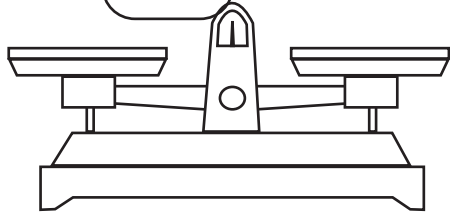
$$8 + \square = 5 + 9$$



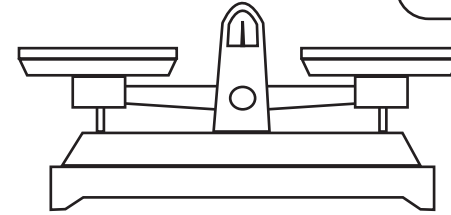
$$11 + 3 = \square + 5$$



$$8 + \square = 12 + 2$$



$$13 + 1 = 9 + \square$$



# Making 14 and 15

## Sheet 5

### Making 14

$$8 + \square = 14 + 0$$

$$16 - 9 = \square + 6$$

$$12 + 2 = \square + 4$$

$$\square + 5 = 1 + 13$$

$$\square - 3 = 4 + 10$$

$$\square + 7 = 15 - 1$$

$$\square + 9 = 7 + 7$$

$$9 + 5 = 20 - \square$$

$$6 + 8 = 11 + \square$$

$$10 + \square = 3 + 11$$

### Making 15

$$10 + \square = 13 + 2$$

$$12 + 3 = \square + 6$$

$$\square + 9 = 8 + 7$$

$$\square + 5 = 2 + 13$$

$$19 - 4 = 11 + \square$$

$$\square + 12 = 6 + 9$$

$$0 + \square = 3 + 12$$

$$15 + 0 = 20 - \square$$

$$4 + \square = 16 - 1$$

$$\square + 14 = 4 + 11$$

### Challenge

Use three consecutive single digit numbers and add them, e.g.  $1 + 2 + 3$ .  
What is the largest possible total? Can you make 18?  
How many possible totals can you find?

# Making 16, 17, 18, 19 and 20

## Sheet 6

$$8 + \square = 14 + 4$$

$$12 + 4 = \square + 6$$

$$\square + 8 = 1 + 16$$

$$\square + 10 = 2 + 18$$

$$6 + 10 = 11 + \square$$

$$20 - \square = 14 + 5$$

$$\square - 0 = 8 + 12$$

$$5 + 13 = 12 + \square$$

$$0 + \square = 13 + 7$$

$$7 + \square = 14 + 2$$

$$1 + 17 = \square + 16$$

$$\square + 14 = 19 - 2$$

$$\square + 5 = 4 + 13$$

$$\square + 9 = 19 - 1$$

$$6 + 13 = 11 + \square$$

$$20 - \square = 5 + 11$$

$$15 + 5 = \square + 3$$

$$\square + 3 = 10 + 9$$

$$\square + 12 = 6 + 14$$

$$15 + 1 = 8 + \square$$

$$\square + 12 = 4 + 15$$

$$\square - 2 = 8 + 9$$

$$15 + 3 = 10 + \square$$

$$\square + 9 = 4 + 11$$

### Challenge

Use three consecutive single digit numbers and add them, e.g.  $1 + 2 + 3$ .

What is the largest possible total? Can you make 18?

How many possible totals can you find?



# Pairs to 10 and 20

## Sheet 1

Make pairs to 10.

$9 + \square = 10$

$\square + 3 = 10$

$7 + \square = 10$

$4 + \square = 10$

$\square + 5 = 10$

$\square + 2 = 10$

Complete these bars. Draw new bricks in a different colour.  
The first one is done for you.

Make pairs to 20

$15 + \square = 20$



$14 + \square = 20$



$13 + \square = 20$



$17 + \square = 20$



$11 + \square = 20$



$18 + \square = 20$



### Challenge

You have number cards 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10. Make pairs to 10, e.g. 6 and 4. How many pairs can you make? Which pair is impossible to make?

## Pairs to 20

### Sheet 2

Find the missing numbers.

$$10 + \square = 20$$

$$8 + \square = 20$$

$$6 + \square = 20$$

$$3 + \square = 20$$

$$\square + 5 = 20$$

$$\square + 9 = 20$$

$$\square + 14 = 20$$

$$\square + 13 = 20$$

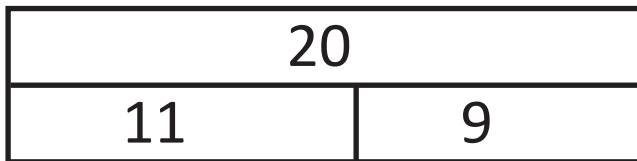
#### Challenge

You have 21 cards: 0 to 20. You can create pairs of numbers making 20. Write these down. Write the pair you cannot create.

# Pairs to 20

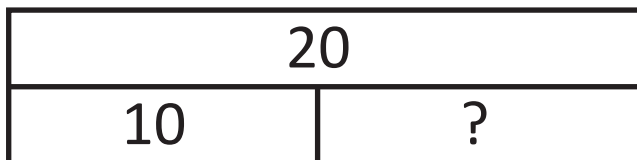
## Sheet 3

This is a bar model:



Draw your own bar models for a friend to complete. Have one number missing. The total is 20. You must note the answers so you know if your friend got them right!

Example:



Draw at least six different bar models.

### Challenge

Complete a friend's bar models and then mark each other's work. Were there any errors? Can you explain how to correct the errors?

## Multiples of 5: pairs to 100

### Sheet 4

#### Set A

$45 + \square = 100$     $25 + \square = 100$     $15 + \square = 100$     $75 + \square = 100$     $55 + \square = 100$

$95 + \square = 100$     $35 + \square = 100$     $65 + \square = 100$     $85 + \square = 100$     $5 + \square = 100$

#### Set B

$100 - \square = 35$     $100 - \square = 85$     $100 - \square = 15$     $100 - \square = 55$     $100 - \square = 25$

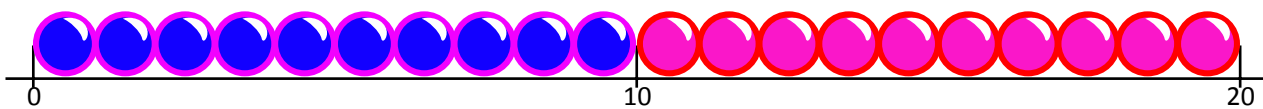
$100 - \square = 95$     $100 - \square = 75$     $100 - \square = 45$     $100 - \square = 65$     $100 - \square = 5$

#### Challenge

Find a pair of numbers which total 100 where the digits add to 19. Can you find another? And another? Explain your findings.

# Pairs to 10 and 20

## Sheet 1



Write the missing numbers.

10	
6	

20	
10	

10	
	3

20	
	13

10	
9	

20	
	16

10	
4	

20	
6	

10	
8	

20	
	18

### Challenge

Write 3 challenge questions for a friend to solve. Write them like this:

$$\square + 2 = 10$$

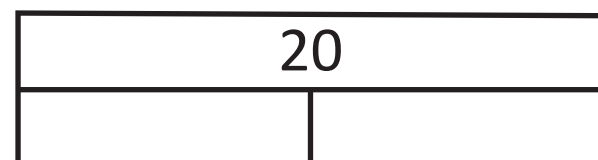
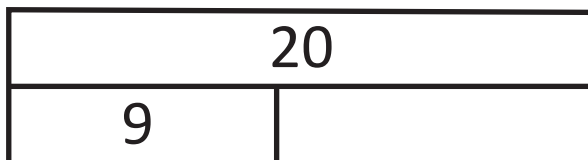
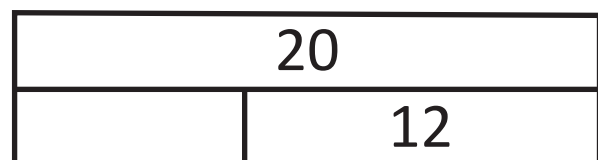
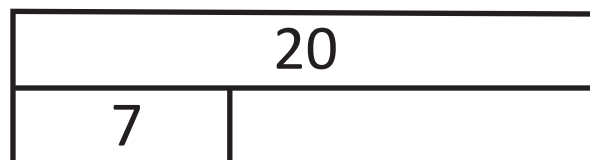
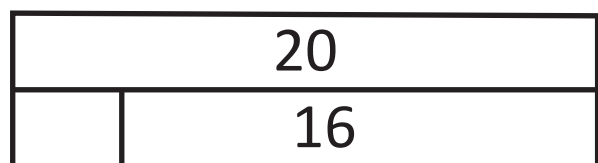
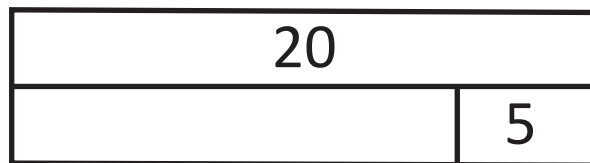
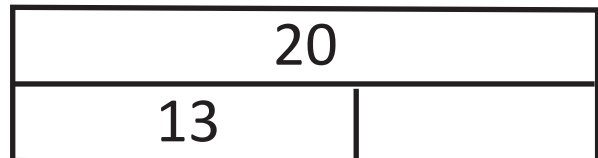
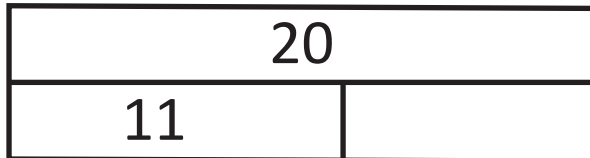
or

$$\square + 13 = 20$$

# Pairs to 20

## Sheet 2

Write the missing number in each bar model.



### Challenge (to be done in pairs)

How many pairs of numbers can you find that equal 10?

Estimate how many pairs of numbers there are that equal 20. Explain why you estimated this number.

Now, write all the pairs of numbers that equal 20. How close to your estimate were you?

## Missing numbers

### Sheet 3

Write the pairs of possible missing numbers.  
How many different pairs can you find for each problem?

20		
11	?	?

20		
13	?	?

20		
9	?	?

20		
6	?	?

20		
7	?	?

20		
8	?	?

### Challenge

Complete the table below to find the missing numbers.

Numbers to add			Total
5		3	20
	4	12	20
13	2		20
7		5	20
	8	6	20
11	3		20
5		9	20

# Missing numbers

## Sheet 4

$5 + \square = 6$

$\square + 3 = 8$

$\square + 7 = 7$

$\square + 2 = 8$

$2 + \square = 9$

$\square + 0 = 7$

$8 + \square = 9$

$5 + \square = 9$

$7 + \square = 8$

$\square + 1 = 9$

$0 + \square = 8$

$\square + 5 = 8$

$2 + \square = 7$

$4 + \square = 7$

$\square + 3 = 6$

$1 + \square = 7$

$\square + 4 = 6$

$1 + \square = 8$

$\square + 7 = 9$

$6 + \square = 8$

$3 + \square = 7$

$\square + 2 = 7$

$8 + \square = 8$

$\square + 1 = 6$

$6 + \square = 9$

$2 + \square = 6$

$6 + \square = 7$

$4 + \square = 9$

### Challenge

Check this sentence:  $6 + 2 = \text{twice } (6 - 2)$

The digits 6 and 2 make this work. Find another pair of digits that make a similar sentence. Can you find a third pair?



# Missing numbers

## Sheet 5

$5 + \square = 13$

$9 + \square = 14$

$7 + \square = 16$

$6 + \square = 15$

$\square + 9 = 13$

$8 + \square = 17$

$6 + \square = 14$

$\square + 6 = 13$

$\square + 9 = 17$

$\square + 7 = 15$

$14 - 9 = \square$

$8 + \square = 16$

$13 - 4 = \square$

$8 + \square = 15$

$18 - 9 = \square$

$\square + 8 = 13$

$\square + 9 = 15$

$13 - 7 = \square$

$8 + \square = 14$

$16 - 9 = \square$

$\square + 3 = 13$

$5 + \square = 15$

$\square + 7 = 17$

$11 + \square = 14$

$12 + \square = 18$

$\square + 12 = 16$

### Challenge

Check this sentence:  $6 + 2 = \text{twice } (6 - 2)$

The digits 6 and 2 make this work. Find another pair of digits that make a similar sentence. Can you find a third pair?

# Missing numbers

## Sheet 6

$5 + \square = 13$

$9 + \square = 14$

$7 + \square = 16$

$15 - 6 = \square$

$\square + 9 = 13$

$17 - 8 = \square$

$6 + \square = 14$

$\square + 3 = 13$

$5 + \square = 15$

$17 - 7 = \square$

$11 + \square = 14$

$12 + \square = 18$

$\square + 12 = 16$

$\square + 2 = 13$

$17 - 15 = \square$

$\square + 13 = 15$

$2 + \square = 14$

$16 - 3 = \square$

$\square + 13 = 13$

$15 - 3 = \square$

$4 + \square = 18$

$\square + 14 = 17$

$\square + 11 = 15$

$16 - 13 = \square$

$3 + \square = 18$

$14 - 0 = \square$

# Mystery numbers

## Sheet 1

Find the mystery numbers.

$10 + \bigcirc = 20$

$\square + 11 = 20$

$\square + 15 = 20$

$\triangle + 7 = 20$

$7 + \triangle = 20$

$16 + \bigcirc = 20$

$12 + \bigcirc = 20$

$4 + \square = 20$

$4 + \square = 20$

$6 + \triangle = 20$

$\triangle + 2 = 20$

$13 + \bigcirc = 20$

### Challenge

Circle the correct sums below:

$3 + 7 = 20$

$14 + 4 = 20$

$12 + 8 = 20$

$13 + 7 = 20$

$19 + 2 = 20$

$12 + 18 = 20$

$15 + 5 = 20$

## Missing numbers

### Sheet 2

Write the possibilities for the missing numbers in each sentence.  
The first one is done for you.

$$10 + \square + \square = 20$$

$$10 + 5 + 5 \quad \text{or} \quad 10 + 4 + 6 \quad \text{or} \quad 10 + 3 + 7$$

$$10 + 2 + 8 \quad \text{or} \quad 10 + 9 + 1 \quad \text{or} \quad 10 + 10 + 0$$

$$\square + \square + 15 = 20$$

$$17 + \square + \square = 20$$

$$12 + \square + \square = 20$$

$$14 + \square + \square = 20$$

$$\square + 16 + \square = 20$$

$$\square + 11 + \square = 20$$

$$\square + \square + 13 = 20$$

$$9 + \square + \square = 20$$

$$\square + \square + 18 = 20$$

#### Challenge

$$\blacksquare + \blacklozenge + \blacktriangle + \square = 40$$

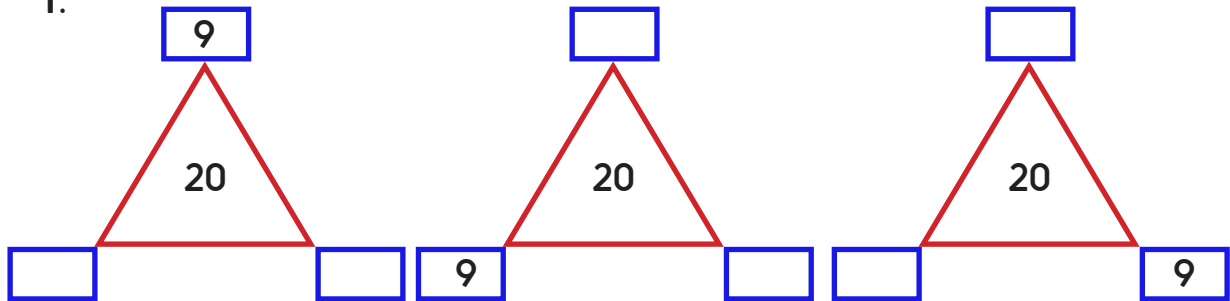
All four are odd numbers.  
What are they?

# Triangles

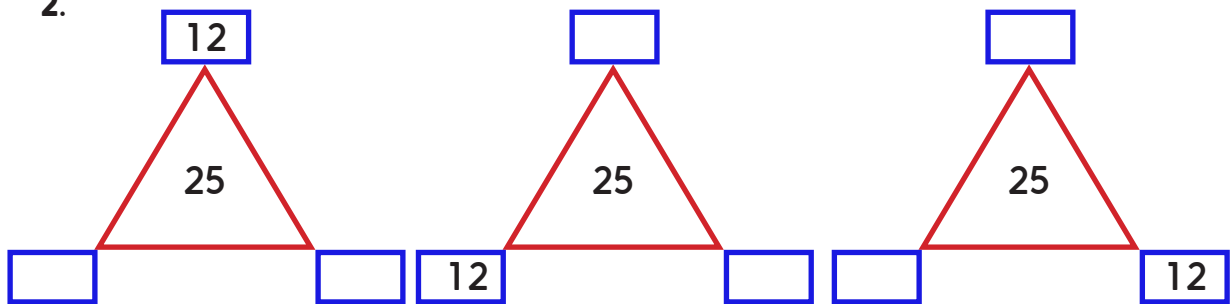
## Sheet 3

In each triangle the numbers at the three corners add to the number in the centres, give three possible answers for each set.

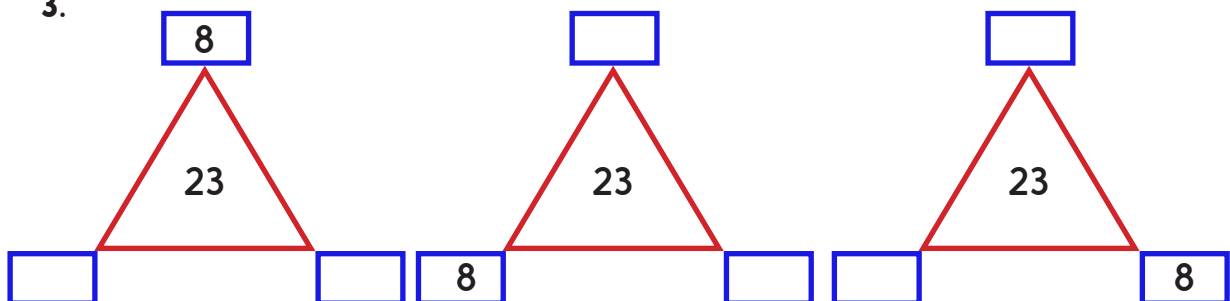
1.



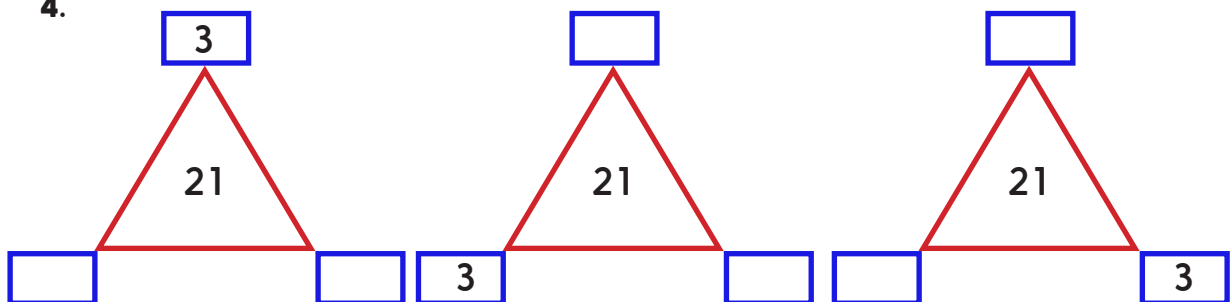
2.



3.



4.



### Challenge

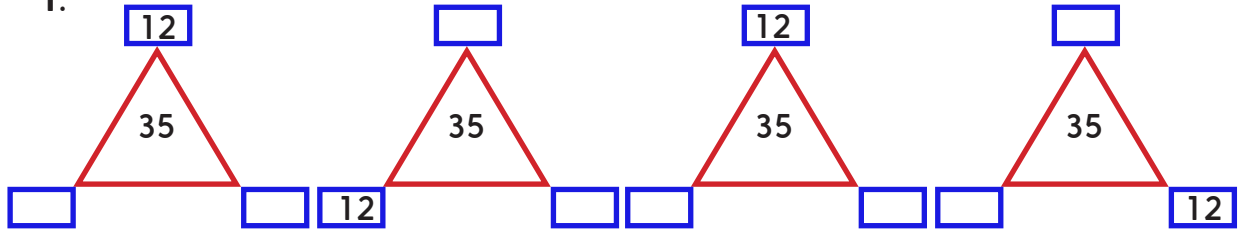
A triangle has 24 in the centre. The numbers at the corners are all 5 or more. What could they be?

# Triangles

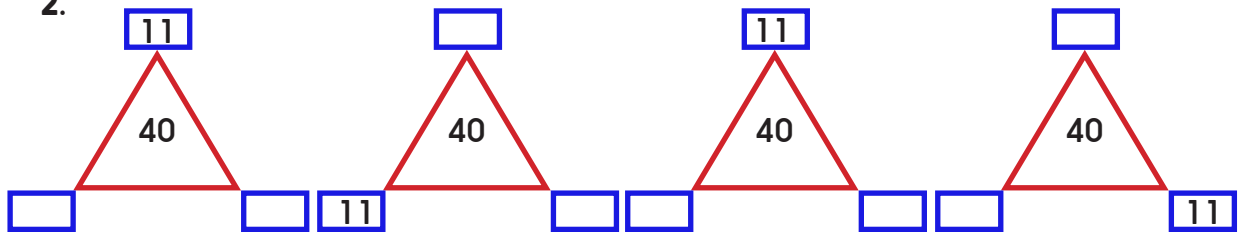
## Sheet 4

In each triangle the numbers at the three corners add to the number in the centres, give three possible answers for each set.

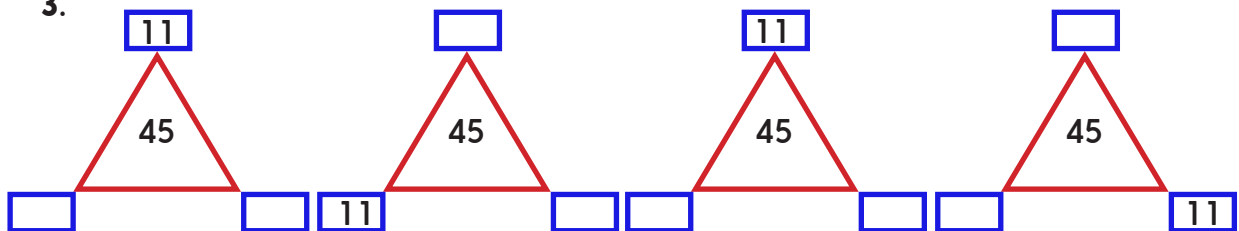
1.



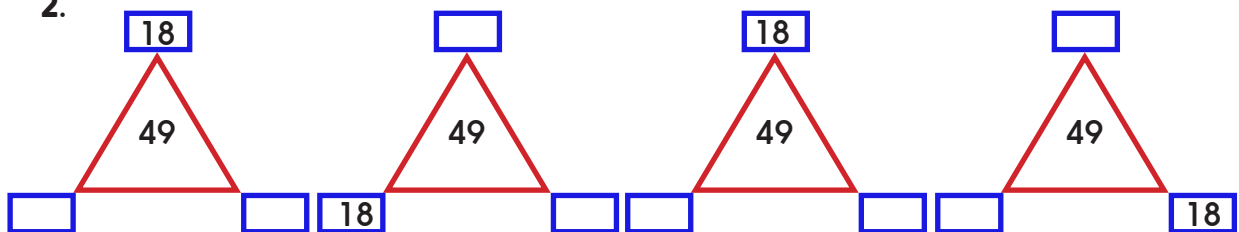
2.



3.



2.



### Challenge

A triangle has 38 in the centre. The numbers at the corners are all 5 or more. Find 3 possible sets of numbers that they could be.

# Addition and Subtraction

## Answers

### Day 1 Y2 Addition and Subtraction Sheet 1

$$\begin{array}{lll} 5 + 5 = 10 & 3 + 5 = 8 & 4 + 5 = 9 \\ 6 + 4 = 10 & 6 + 2 = 8 & 6 + 3 = 9 \\ 7 + 3 = 10 & 7 + 1 = 8 & 7 + 2 = 9 \\ 8 + 2 = 10 & & \end{array}$$

#### Challenge

There are **five** ways to make 10 using 2 numbers ( $1 + 9$ ,  $2 + 8$ ,  $3 + 7$ ,  $4 + 6$  and  $5 + 5$ ), or **six** ways if you include  $0 + 10$ .

### Day 1 Y2 Addition and Subtraction Sheet 2

$$\begin{array}{llll} 6 + 4 = 10 & 0 + 10 = 10 & 1 + 9 = 10 & 2 + 8 = 10 \\ 3 + 7 = 10 & 4 + 6 = 10 & 7 + 3 = 10 & 8 + 2 = 10 \\ 9 + 1 = 10 & 10 + 0 = 10 & & \end{array}$$

There are only enough bags for the children to record nine of the possible ten solutions given here.

#### Challenge

Accept answers where children have used 3 numbers to give a total of 10, e.g.  
 $1 + 2 + 7$     $2 + 3 + 5$     $3 + 4 + 3$     $4 + 5 + 1$     $5 + 1 + 4$     $6 + 2 + 2$   
 $7 + 2 + 1$     $8 + 1 + 1$    and so on...

### Day 1 Y2 Addition and Subtraction Sheet 3

In any order:

$$\begin{array}{llll} 1 + 1 + 8 & 1 + 2 + 7 & 1 + 3 + 6 & 1 + 4 + 5 \\ 2 + 2 + 6 & 2 + 3 + 5 & 2 + 4 + 4 & 3 + 3 + 4 \end{array}$$

#### Challenge

In any colour order:  
 $1 + 2 + 3 + 4$

### Day 1 Y3 Balancing the scales Sheet 4

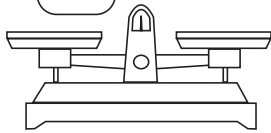
$$\begin{array}{ccc} 6 + 8 = 5 + 9 & 9 + 5 = 6 + 8 & 7 + 7 = 4 + 10 \\ \img alt="A balance scale with a weight of 6 on the left pan and a weight of 5 on the right pan. A box with the number 9 is next to the right pan." data-bbox="118 825 288 881"/> & \img alt="A balance scale with a weight of 9 on the left pan and a weight of 6 on the right pan. A box with the number 8 is next to the right pan." data-bbox="341 825 511 881"/> & \img alt="A balance scale with a weight of 7 on the left pan and a weight of 4 on the right pan. A box with the number 10 is next to the right pan." data-bbox="594 825 764 881"/> \end{array}$$

# Addition and Subtraction

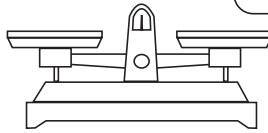
## Answers

### Day 1 Y3 Balancing the scales Sheet 4 continued

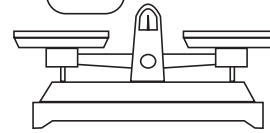
$7 + \boxed{7} = 8 + 6$



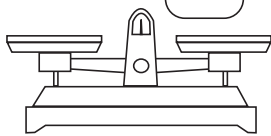
$10 + 4 = 9 + \boxed{5}$



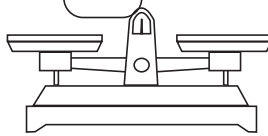
$8 + \boxed{6} = 5 + 9$



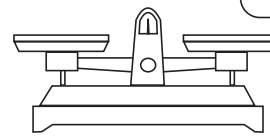
$11 + 3 = \boxed{9} + 5$



$8 + \boxed{6} = 12 + 2$



$13 + 1 = 9 + \boxed{5}$



### Day 1 Y3 Making 14 and 15 Sheet 5

Making 14

$8 + \boxed{6} = 14 + 0$

$12 + 2 = \boxed{10} + 4$

$\boxed{17} - 3 = 4 + 10$

$\boxed{5} + 9 = 7 + 7$

$6 + 8 = 11 + \boxed{3}$

$16 - 9 = \boxed{1} + 6$

$\boxed{9} + 5 = 1 + 13$

$\boxed{14} + 7 = 15 - 1$

$9 + 5 = 20 - \boxed{6}$

$10 + \boxed{4} = 3 + 11$

Making 15

$10 + \boxed{5} = 13 + 2$

$\boxed{6} + 9 = 8 + 7$

$19 - 4 = 11 + \boxed{4}$

$0 + \boxed{15} = 3 + 12$

$4 + \boxed{11} = 16 - 1$

$12 + 3 = \boxed{9} + 6$

$\boxed{10} + 5 = 2 + 13$

$\boxed{3} + 12 = 6 + 9$

$15 + 0 = 20 - \boxed{5}$

$\boxed{1} + 14 = 4 + 11$

### Day 1 Y3 Making 16, 17, 18, 19 and 20 Sheet 6

$8 + \boxed{10} = 14 + 4$

$12 + 4 = \boxed{10} + 6$

$\boxed{9} + 8 = 1 + 16$

$\boxed{10} + 10 = 2 + 18$

$6 + 10 = 11 + \boxed{5}$

$20 - \boxed{1} = 14 + 5$

$\boxed{20} - 0 = 8 + 12$

$5 + 13 = 12 + \boxed{6}$

$0 + \boxed{20} = 13 + 7$

$7 + \boxed{9} = 14 + 2$

$1 + 17 = \boxed{2} + 16$

$\boxed{3} + 14 = 19 - 2$

$\boxed{12} + 5 = 4 + 13$

$\boxed{9} + 9 = 19 - 1$

$6 + 13 = 11 + \boxed{8}$

$20 - \boxed{4} = 5 + 11$

$15 + 5 = \boxed{17} + 3$

$\boxed{16} + 3 = 10 + 9$

$\boxed{8} + 12 = 6 + 14$

$15 + 1 = 8 + \boxed{8}$

$\boxed{7} + 12 = 4 + 15$

$\boxed{19} - 2 = 8 + 9$

$15 + 3 = 10 + \boxed{8}$

$\boxed{6} + 9 = 4 + 11$

### Challenge

Largest possible total is 24 ( $7 + 8 + 9$ ).

$5 + 6 + 7 = 18$

There are 7 possible totals ( $1 + 2 + 3$ ,  $2 + 3 + 4$ ,  $3 + 4 + 5$ ,  $4 + 5 + 6$ ,  $5 + 6 + 7$ ,  $6 + 7 + 8$  and  $7 + 8 + 9$ ).



# Addition and Subtraction

## Answers

### Day 2 Y2 Pairs to 10 and 20 Sheet 1

$9 + 1 = 10$   
 $4 + 6 = 10$

$7 + 3 = 10$   
 $5 + 5 = 10$

$7 + 3 = 10$   
 $8 + 2 = 10$

$15 + 5 = 20$   
 $14 + 6 = 20$   
 $13 + 7 = 20$   
 $17 + 3 = 20$   
 $11 + 9 = 20$   
 $18 + 2 = 20$

#### Challenge

$0 + 10$  Children may also present the numbers in a different order e.g  $10 + 0$ .  
 $1 + 9$   
 $2 + 8$  You cannot make the pair  $5 + 5$ , because you only have one 5 card.  
 $6 + 4$   
 $3 + 7$

### Day 2 Y2 Pairs to 20 Sheet 2

$10 + 10 = 20$   
 $8 + 12 = 20$   
 $6 + 14 = 20$   
 $3 + 17 = 20$   
 $15 + 5 = 20$   
 $11 + 9 = 20$   
 $6 + 14 = 20$   
 $7 + 13 = 20$

#### Challenge

$0 + 20$	$5 + 15$	You cannot make the pair $10 + 10$ , because you only have one 10 card.
$1 + 19$	$6 + 14$	
$2 + 18$	$7 + 13$	
$3 + 17$	$8 + 12$	
$4 + 16$	$9 + 11$	

### Day 2 Pairs to 20 Sheet 3

Bar models with numbers making 20. These could show any of the following pairs:  
 $0, 20$   $1, 19$   $2, 18$   $3, 17$   $4, 16$   $5, 15$   $6, 14$   $7, 13$   $8, 12$   $9, 11$   $10, 10$

# Addition and Subtraction

## Answers

### Day 2 Y3 Multiples of 5: pairs to 100 Sheet 4

#### Set A

$45 + 55 = 100 \quad 25 + 75 = 100 \quad 15 + 85 = 100 \quad 75 + 25 = 100 \quad 55 + 45 = 100$

$95 + 5 = 100 \quad 35 + 65 = 100 \quad 65 + 35 = 100 \quad 85 + 15 = 100 \quad 5 + 95 = 100$

#### Set B

$100 - 65 = 35 \quad 100 - 15 = 85 \quad 100 - 85 = 15 \quad 100 - 45 = 55 \quad 100 - 75 = 25$

$100 - 5 = 95 \quad 100 - 25 = 75 \quad 100 - 55 = 45 \quad 100 - 35 = 65 \quad 100 - 95 = 5$

#### Challenge

$15 + 85 = 100$

$25 + 75 = 100$

$35 + 65 = 100$

$45 + 55 = 100$

The digits add to 19 because the Tens digits have to make 9 tens and the Ones digits need to total 10, and  $9 + 10 = 19$

### Day 3 Y2 Pairs to 10 and 20 Sheet 1

10	
6	4

20	
10	10

10	
7	3

20	
7	13

10	
9	1

20	
4	16

10	
4	6

20	
6	14

10	
8	2

20	
2	18

# Addition and Subtraction

## Answers

### Day 3 Y2 Pairs to 20 Sheet 2

20	
11	9

20	
13	7

20	
15	5

20	
4	16

20	
7	13

20	
8	12

20	
9	11

20	
10	10

#### Challenge

Pairs of numbers that equal 10 :

$0 + 10$      $1 + 9$      $2 + 8$      $3 + 7$      $4 + 6$

There are twice as many. As 20 is double 10 there are double number of pairs.

Pairs of numbers that equal 20:

$0 + 20$      $1 + 19$      $2 + 18$      $3 + 17$      $4 + 16$      $5 + 15$

### Day 3 Y2 Missing numbers Sheet 3

Bar models - accept any pairs of numbers making the totals needed to add to get to 20.

#### Challenge

Complete the table below to find the missing numbers.

Numbers to add			Total
5	12	3	20
4	4	12	20
13	2	5	20
7	8	5	20
6	8	6	20
11	3	6	20
5	6	9	20

# Addition and Subtraction

## Answers

### Day 3 Y3 Missing Numbers Sheet 4

$5 + \boxed{1} = 6$

$\boxed{5} + 3 = 8$

$\boxed{0} + 7 = 7$

$\boxed{6} + 2 = 8$

$2 + \boxed{7} = 9$

$\boxed{7} + 0 = 7$

$8 + \boxed{1} = 9$

$5 + \boxed{4} = 9$

$7 + \boxed{1} = 8$

$\boxed{8} + 1 = 9$

$0 + \boxed{8} = 8$

$\boxed{3} + 5 = 8$

$2 + \boxed{5} = 7$

$4 + \boxed{3} = 7$

$\boxed{3} + 3 = 6$

$1 + \boxed{6} = 7$

$\boxed{2} + 4 = 6$

$1 + \boxed{7} = 8$

$\boxed{2} + 7 = 9$

$6 + \boxed{2} = 8$

$3 + \boxed{4} = 7$

$\boxed{5} + 2 = 7$

$8 + \boxed{0} = 8$

$\boxed{5} + 1 = 6$

$6 + \boxed{3} = 9$

$2 + \boxed{4} = 6$

$6 + \boxed{1} = 7$

$4 + \boxed{5} = 9$

### Challenge

$3 + 1$  - twice  $(3 - 1)$  and  $9 + 3$  - twice  $(9 - 3)$

### Day 3 Y3 Missing Numbers Sheet 5

$5 + \boxed{8} = 13$

$8 + \boxed{7} = 15$

$9 + \boxed{5} = 14$

$18 - 9 = \boxed{9}$

$7 + \boxed{9} = 16$

$\boxed{5} + 8 = 13$

$6 + \boxed{9} = 15$

$\boxed{6} + 9 = 15$

$\boxed{4} + 9 = 13$

$13 - 7 = \boxed{6}$

$8 + \boxed{9} = 17$

$8 + \boxed{6} = 14$

$6 + \boxed{8} = 14$

$16 - 9 = \boxed{7}$

$\boxed{7} + 6 = 13$

$\boxed{10} + 3 = 13$

$\boxed{8} + 9 = 17$

$5 + \boxed{10} = 15$

$\boxed{8} + 7 = 15$

$\boxed{10} + 7 = 17$

# Addition and Subtraction

## Answers

### Day 3 Y3 Missing Numbers Sheet 5 continued

$14 - 9 = 5$

$11 + 3 = 14$

$8 + 8 = 16$

$12 + 6 = 18$

$13 - 4 = 9$

$4 + 12 = 16$

#### Challenge

$3 + 1 - \text{twice } (3 - 1)$  and  $9 + 3 - \text{twice } (9 - 3)$

### Day 3 Y3 Missing Numbers Sheet 6

$5 + 8 = 13$

$11 + 2 = 13$

$9 + 5 = 14$

$17 - 15 = 2$

$7 + 9 = 16$

$2 + 13 = 15$

$15 - 6 = 9$

$2 + 12 = 14$

$4 + 9 = 13$

$16 - 3 = 13$

$17 - 8 = 9$

$0 + 13 = 13$

$6 + 8 = 14$

$15 - 3 = 12$

$10 + 3 = 13$

$4 + 14 = 18$

$5 + 10 = 15$

$3 + 14 = 17$

$17 - 7 = 10$

$4 + 11 = 15$

$11 + 3 = 14$

$16 - 13 = 3$

$12 + 6 = 18$

$3 + 15 = 18$

$4 + 12 = 16$

$14 - 0 = 14$

# Addition and Subtraction

## Answers

### Day 4 Y3 Mystery numbers Sheet 1

$10 + \textcircled{10} = 20$

$\textcircled{9} + 11 = 20$

$\textcircled{5} + 15 = 20$

$\triangle 13 + 7 = 20$

$7 + \triangle 13 = 20$

$16 + \textcircled{4} = 20$

$12 + \textcircled{8} = 20$

$4 + \textcircled{16} = 20$

$4 + \textcircled{16} = 20$

$6 + \triangle 14 = 20$

$\triangle 18 + 2 = 20$

$13 + \textcircled{7} = 20$

### Challenge

Circle the correct sums below:

$3 + 7 = 20$

$14 + 4 = 20$

$\textcircled{12 + 8 = 20}$

$\textcircled{13 + 7 = 20}$

$19 + 2 = 20$

$12 + 18 = 20$

$\textcircled{15 + 5 = 20}$

### Day 4 Y2 Missing numbers Sheet 2

$\textcircled{0} + \textcircled{5} + 15 = 20$

$1 + 4$

$2 + 3$

$17 + \textcircled{0} + \textcircled{3} = 20$

$1 + 2$

$12 + \textcircled{0} + \textcircled{8} = 20$

$1 + 7$

$2 + 6$

$3 + 5$

$4 + 4$

$14 + \textcircled{0} + \textcircled{6} = 20$

$1 + 5$

$2 + 4$

$3 + 3$

$\textcircled{0} + 16 + \textcircled{4} = 20$

$1 + 3$

$2 + 2$

$\textcircled{0} + 11 + \textcircled{9} = 20$

$1 + 8$

$2 + 7$

$3 + 6$

$4 + 5$

$\textcircled{0} + \textcircled{7} + 13 = 20$

$1 + 6$

$2 + 5$

$3 + 4$

# Addition and Subtraction

## Answers

### Day 4 Y2 Missing numbers Sheet 2 continued

$$9 + \boxed{0} + \boxed{11} = 20$$

$$\boxed{0} + \boxed{2} + 18 = 20$$

$$1 + 10$$

$$5 + 6$$

$$1 + 1$$

$$2 + 9$$

$$3 + 8$$

$$4 + 7$$

#### Challenge

■ + ◆ + △ + □ = 40 All four are odd numbers.  
What are they?

Accept any combination of four numbers which total 40.

### Day 4 Y3 Triangles Sheet 3

1. Any pair that adds to 11.
2. Any pair that adds to 13.
3. Any pair that adds to 15.
4. Any pair that adds to 18.

#### Challenge

A triangle has 24 in the centre. The numbers at the corner are all 5 or more. What could they be?

5, 6, 13

5, 7, 12

5, 8, 11

5, 9, 10

6, 7, 11

6, 8, 10

6, 9, 9

7, 8, 9

### Day 4 Y3 Triangles Sheet 4

1. Any pair that adds to 23.
2. Any pair that adds to 18.
3. Any pair that adds to 34.
4. Any pair that adds to 31.

#### Challenge

A triangle has 38 in the centre. The numbers at the corner are all 5 or more. Find 3 possible sets of numbers that they could be.

Answers could include the following:

5, 6, 27

5, 7, 26

5, 8, 25

5, 9, 24

5, 10, 23

5, 11, 22

5, 12, 21

5, 13, 20

5, 14, 19

5, 15, 18

5, 16, 17

6, 7, 25

6, 8, 24

6, 9, 23

6, 10, 22

6, 11, 21

6, 12, 20

6, 13, 19

6, 14, 18

6, 15, 17

6, 16, 16

7, 8, 23

7, 9, 22

7, 10, 21

7, 11, 20

7, 12, 19

7, 13, 18

7, 14, 17

7, 15, 16

8, 9, 21

8, 10, 20

8, 11, 19

8, 12, 18

8, 13, 17

8, 14, 16

8, 15, 15 and so on.