C2 BAR CHARTS 76

I can use a bar chart to find information and draw a bar chart labelled in twos.

Example
The ages of children in a basketball club.

10	9	8	10	9	10	11
8	10	11	9	10	8	10
9	10	10	8	11	10	9
10	11	9	10	8	9	10

A frequency table showing the ages.

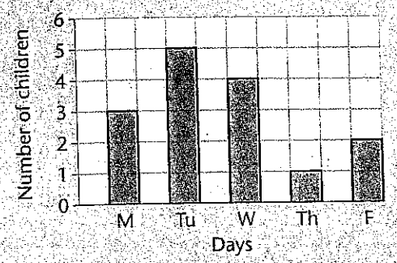
Ages	No. of children
8	5
9	7
10	12
11	4

The data in the frequency table can be displayed in a bar chart.

Notice:
- each axis is labelled
- the vertical axis goes up in 2s
- the bars do not touch
- the bars are of equal width.

A

This block graph shows the number of children absent from school each day in Year 3.



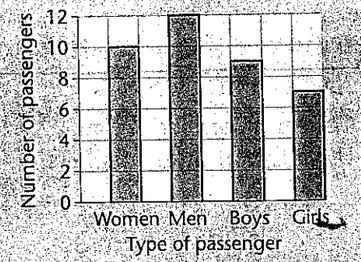
1. How many children were absent on Monday?
2. On which day were 4 children absent?
3. On which day were most children absent?
4. On which day were least children absent?
5. How many more children were absent on Wednesday than on Friday?
6. How many fewer children were absent on Monday than on Tuesday?
7. This frequency table shows how children in a class came to school on one day.

Travel Method	Number of Children
Bus	3
Bike	4
Car	5
Train	2
Walk	6

Draw a block graph to show the information.

B

This graph shows the passengers on a bus.



1. How many women were on the bus?
2. How many boys were on the bus?
3. How many adults were passengers?
4. How many more women than girls were passengers?
5. How many fewer boys than men were passengers?
6. How many passengers were there altogether?
7. This frequency table shows the number of children in Class 3 having a packed lunch each day.

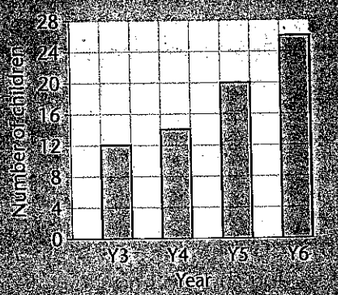
Day	Packed Lunches
Monday	12
Tuesday	9
Wednesday	14
Thursday	8
Friday	13

Draw a bar chart labelled in twos to show the information.

8. There are 30 children in Class 3. All the other children have a school dinner. Make a frequency table and then draw a bar chart showing the number of children in Class 3 having a school dinner each day.

C

This graph shows how many children in each year group walked to school every day in January.



1. How many children walked to school in Year 5?
2. In which year group did 14 children walk to school?
3. How many more children walked to school in Year 6 than in Year 5?
4. How many fewer children walked to school in Year 3 than in Year 4?
5. How many children walked to school altogether?
6. Draw what you think the graph might look like in July. There are 60 children in each year.
7. The children in a school voted for the colour of their new school uniform. The frequency table shows the results.

Colour	Votes
black	30
blue	50
green	45
red	65
yellow	55

Draw a bar chart labelled in 10s to show the results.

I can use a written method for addition calculations.

Examples

66 + 58

$$\begin{array}{r} 66 \\ +\ 8 \\ \hline 74 \\ +50 \\ \hline 124 \end{array}$$

$$\begin{array}{rl} 66 = & 60 + 6 \\ +58 = & 50 + 8 \\ \hline & 110 + 14 = 124 \end{array}$$

$$\begin{array}{rl} 174 = & 100 + 70 + 4 \\ +156 = & 100 + 50 + 6 \\ \hline & 200 + 120 + 10 = 330 \end{array}$$

A

Copy and complete.

1. $\begin{array}{r} 33 \\ +24 \end{array}$
2. $\begin{array}{r} 42 \\ +25 \end{array}$
3. $\begin{array}{r} 37 \\ +32 \end{array}$
4. $\begin{array}{r} 51 \\ +28 \end{array}$
5. $\begin{array}{r} 65 \\ +33 \end{array}$
6. $\begin{array}{r} 38 \\ +26 \end{array}$
7. $\begin{array}{r} 55 \\ +37 \end{array}$
8. $\begin{array}{r} 49 \\ +45 \end{array}$
9. $\begin{array}{r} 56 \\ +27 \end{array}$
10. $\begin{array}{r} 58 \\ +39 \end{array}$

11. A squirrel hides 47 nuts in one hole and 36 nuts in another hole. How many nuts does the squirrel have hidden away altogether?

B

Copy and complete.

1. $\begin{array}{r} 49 \\ +39 \end{array}$
2. $\begin{array}{r} 66 \\ +45 \end{array}$
3. $\begin{array}{r} 58 \\ +54 \end{array}$
4. $\begin{array}{r} 89 \\ +35 \end{array}$
5. $\begin{array}{r} 74 \\ +68 \end{array}$
6. $\begin{array}{r} 97 \\ +84 \end{array}$
7. $\begin{array}{r} 68 \\ +57 \end{array}$
8. $\begin{array}{r} 93 \\ +38 \end{array}$
9. $\begin{array}{r} 85 \\ +66 \end{array}$
10. $\begin{array}{r} 79 \\ +54 \end{array}$

11. Anita buys a pen for 89p and a pencil for 25p. How much has she spent altogether?
12. There are 76 children on the playground. They are joined by 58 more. How many children are there on the playground now?

C

Set out as in the example.

1. 164 + 147
2. 179 + 159
3. 286 + 128
4. 348 + 275
5. 297 + 136
6. 156 + 144
7. 372 + 269
8. 465 + 286
9. 238 + 148
10. 529 + 377
11. Garry bought a washing machine for £369 and a fridge for £254. How much did he spend altogether?
12. In one hour 435 people went into the supermarket and 387 people left. How many people passed through the entrance?
13. There are 118 cars on Level 1 of a car park and 164 cars on Level 2. How many cars are in the car park?

I can use a written method for subtraction calculations.

Examples

94 − 36

$$\begin{array}{rl} 94 = & 90 + 4 = 80 + 14 \\ -36 = & 30 + 6 = 30 + \ 6 \\ \hline & 50 + \ 8 = 58 \end{array}$$

232 − 46

$$\begin{array}{rl} 232 = & 200 + 30 + 2 = 100 + 120 + 12 \\ -\ 46 = & \quad 40 + 6 = \quad 40 + \ 6 \\ \hline & 100 + \ 80 + \ 6 = 186 \end{array}$$

A

Copy and complete.

1. $\begin{array}{r} 37 \\ -18 \end{array}$
2. $\begin{array}{r} 53 \\ -35 \end{array}$
3. $\begin{array}{r} 68 \\ -42 \end{array}$
4. $\begin{array}{r} 82 \\ -46 \end{array}$
5. $\begin{array}{r} 73 \\ -56 \end{array}$
6. $\begin{array}{r} 91 \\ -37 \end{array}$
7. $\begin{array}{r} 46 \\ -29 \end{array}$
8. $\begin{array}{r} 77 \\ -32 \end{array}$
9. $\begin{array}{r} 53 \\ -28 \end{array}$
10. $\begin{array}{r} 64 \\ -25 \end{array}$

11. Santa has 85 presents in his sack. He gives out 36 of them. How many presents are left?
12. There are 43 children at a party. 26 are girls. How many are boys?

B

Copy and complete.

1. $\begin{array}{r} 64 \\ -\ 37 \end{array}$
2. $\begin{array}{r} 94 \\ -\ 48 \end{array}$
3. $\begin{array}{r} 181 \\ -\ 57 \end{array}$
4. $\begin{array}{r} 136 \\ -\ 83 \end{array}$
5. $\begin{array}{r} 243 \\ -\ 71 \end{array}$
6. $\begin{array}{r} 125 \\ -\ 49 \end{array}$
7. $\begin{array}{r} 158 \\ -\ 64 \end{array}$
8. $\begin{array}{r} 132 \\ -\ 77 \end{array}$
9. $\begin{array}{r} 154 \\ -\ 86 \end{array}$
10. $\begin{array}{r} 163 \\ -\ 75 \end{array}$

11. A baker makes 117 cakes. 79 are sold. How many cakes are left?
12. There are 225 birds on a telephone wire. 93 fly off. How many birds are left?
13. A new bicycle costs £149. Serena has £85. How much more does she need?

C

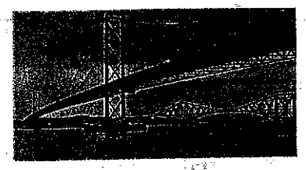
Set out as in the examples.

1. 245 − 138
2. 367 − 183
3. 541 − 425
4. 769 − 383
5. 854 − 289
6. 935 − 472
7. 621 − 367
8. 418 − 182
9. 630 − 297
10. 506 − 355
11. There are 347 people in a cinema. 209 of them are children. How many are adults?
12. A television normally costs £729. In a sale Tara paid £584. How much did she save?
13. Roy has a journey of 412 miles. He drives 136 miles. How much further does he have to go?

I can solve one-step and two-step word problems.

Example

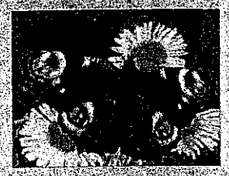
In 15 minutes 300 people cross the river by train on the rail bridge. Twice as many cross the river by car on the road bridge. How many people cross the river altogether?



$300 \times 2 = 600$
$600 + 300 = 900$
Altogether 900 people cross the river.

A

1. There are 40 toys in a shop. 15 are sold on Monday. Nine more are sold on Tuesday. How many toys are left?
2. One butterfly seems to have four eyes. How many eyes would 20 butterflies seem to have?



3. 20 children are asked to choose their favourite colour. 8 children choose blue. Half of the rest choose red. How many children choose a different colour?
4. Annie buys a cake for 50p and a drink for 30p. She pays with £1. How much change will she have?

B

1. A cyclist travels 25 km in one hour. How far does she travel in 3 hours?
2. Helen is 33 years old. Sally is 21 years older. How old is Sally?
3. Phillip buys three ice creams for 80p each. He pays £5. How much change will he receive?
4. The Number 10 bus stops at a bus stop every 20 minutes. How many times does it stop there in six hours?
5. Jamie buys three packets of 8 Christmas cards and a box of 25 cards. How many cards has he bought?
6. Louise has one metre of wood. She saws off 40 cm. She saws off one quarter of the rest. What are the three lengths of wood she now has?

C

1. How many days are there in six weeks?
2. Sarah's book has 58 pages. She needs to read 5 more pages to reach half way. What page is she on?
3. A swimming pool is 25 metres long and 15 metres wide. Sharina swims six lengths and four widths. How far does she swim altogether?
4. Susan's book has 140 pages. She has finished page 50. She reads 15 pages every day. How long will it take her to finish the book?
5. There are 124 passengers on a train. 59 get off. At the next stop 23 more people get off. How many passengers are left on the train?
6. A can of cat food costs 40p. Oliver buys a pack of six cans for £1.85. How much has he saved by buying the pack?

I can solve mathematical problems or puzzles and investigate general statements.

Example

Find a pair of numbers with a sum of 25 and a product of 100.

Answer *20 and 5*
$20 + 5 = 25$ $20 \times 5 = 100$

A

Find the number.

1. between 20 and 30 its digits have a product of 14
2. between 30 and 40 its digits have a sum of 9
3. between 50 and 60 its digits have a product of 20
4. between 40 and 50 its digits have a sum of 7

Give two examples to match each statement.

5. If you double an odd number the answer is an even number.
6. If a number ends in 0 it divides exactly by 10.

Copy and complete.

7. $23 + \square 2 = 45$
8. $26 + 2\square = 49$
9. $16 + \square 7 = 33$
10. $2\square + 15 = 40$
11. $39 - \square 1 = 18$
12. $2\square - 15 = 12$

B

Find the pair of numbers.

1. a sum of 8 a product of 15
2. a sum of 8 a product of 12
3. a sum of 7 a product of 12
4. a sum of 19 a product of 90
5. a sum of 6 a product of 8
6. a sum of 13 a product of 40

Give three examples to match each statement.

7. If you halve a number in the 6 times table the answer is in the 3 times table.
8. The product of two even numbers is always even.

Copy and complete.

9. $\square 3 + 1\square = 38$
10. $3\square + \square 0 = 55$
11. $\square 2 - 1\square = 40$
12. $3\square - \square 4 = 18$
13. $\square 6 + 2\square = 60$
14. $4\square - \square 7 = 29$

C

Find the pair of numbers.

1. a sum of 13 a product of 42
2. a sum of 15 a product of 54
3. a sum of 15 a product of 56
4. a sum of 110 a product of 1000
5. a sum of 27 a product of 140
6. a sum of 29 a product of 100

Give three examples to match each statement.

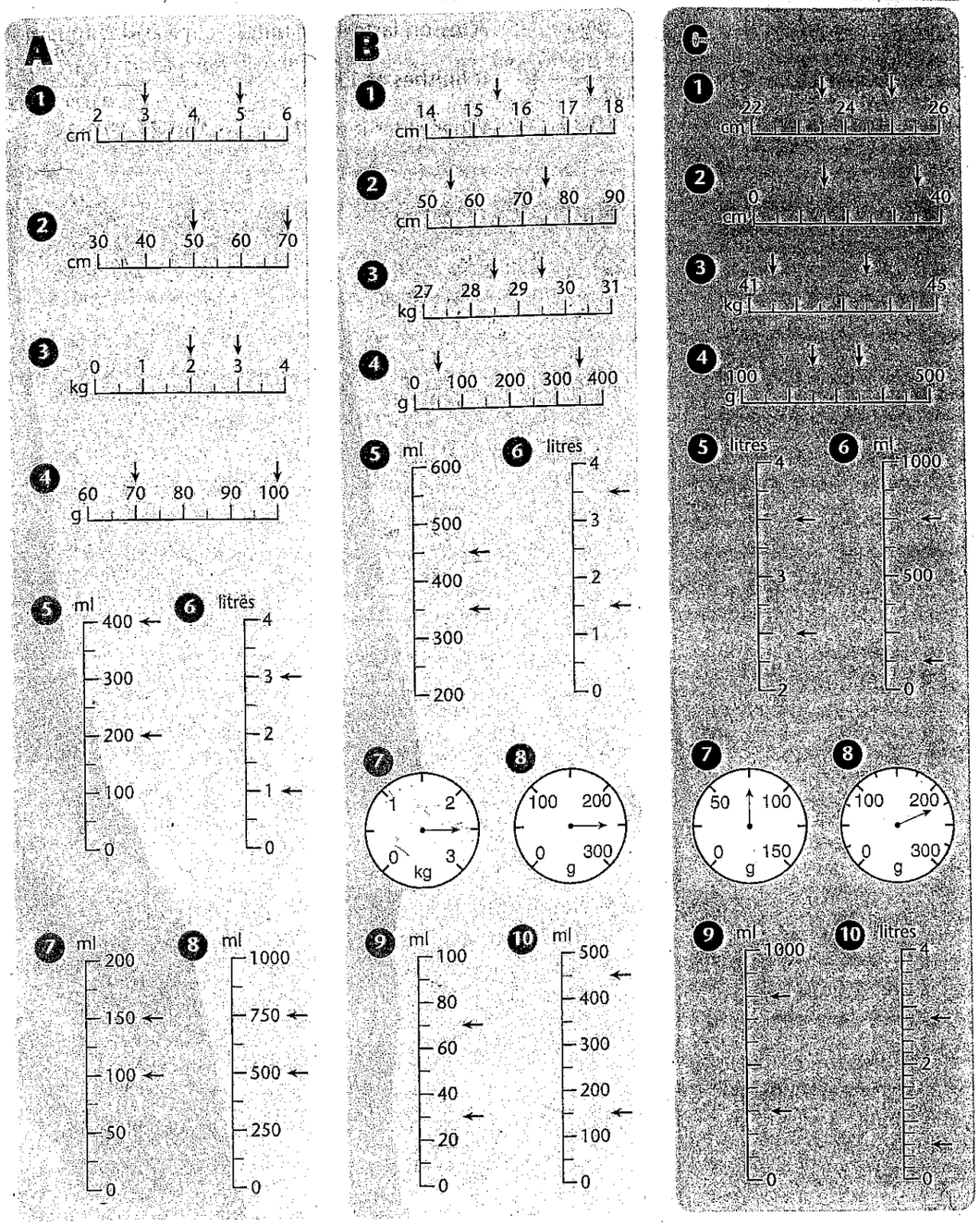
7. The product of two odd numbers is always odd.
8. The product of an odd number and an even number is always even.

Copy and complete.

9. $7\square + \square 2 = 118$
10. $\square 3 + 2\square = 111$
11. $14\square - \square 8 = 77$
12. $10\square - \square 9 = 53$
13. $1\square \times 6 = 84$
14. $\square 7 \times 5 = 13\square$

I can read scales to the nearest division or half-division.

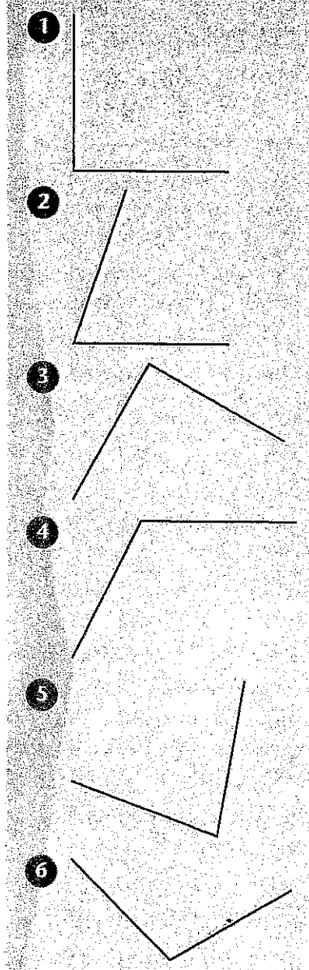
Work out the measurement shown by each arrow.



I can use a set square to compare angles with a right angle.

A

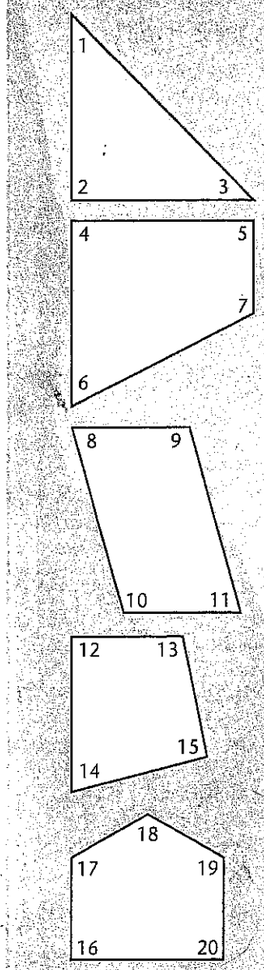
Use a set square.
Decide if each angle is:
a) a right angle
b) less than a right angle
c) greater than a right angle.



7 Use a set square. Draw and label an angle of 90°.

B

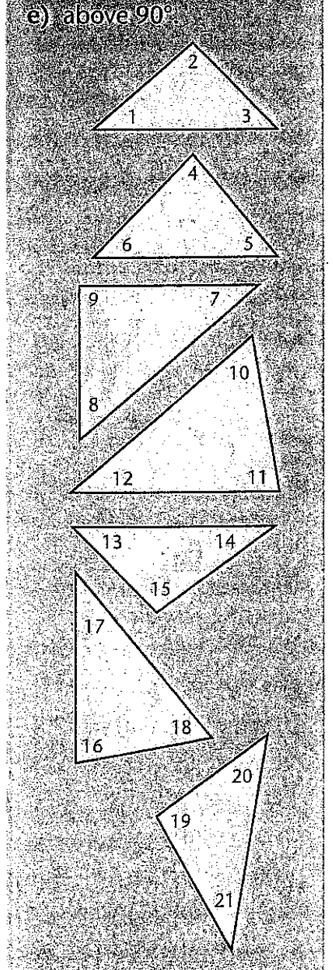
Use a set square.
Decide if each angle is:
a) a right angle
b) less than a right angle
c) greater than a right angle.



21 Use two set squares. Draw and label an angle of 180°.

C

Use a 45° set square.
Decide if each angle is:
a) below 45°
b) 45°
c) between 45° and 90°
d) 90°
e) above 90°



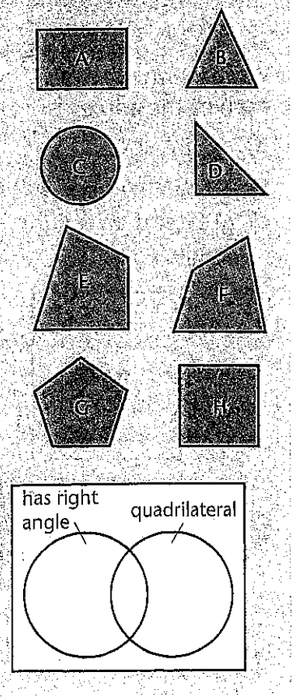
22 Use two set squares. Draw and label an angle of 135°.

1 Copy the Carroll diagram and use it to sort these numbers.

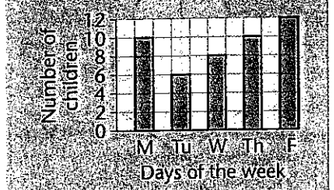
34 115 12 7 128
4 63 149 10 21

	even	not even
two digits		
not two digits		

2 Copy the Venn diagram and write the letters in the correct places.



3 This bar chart shows the number of children in Class 3 having a school dinner in one week.



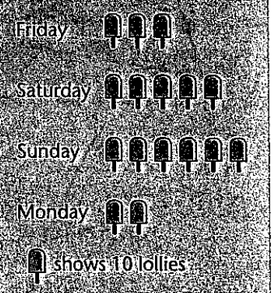
a) How many children had a school dinner on Wednesday?
b) On which days did 10 children have a school dinner?
c) How many more children had a school dinner on Monday than on Tuesday?

4 A class voted for their favourite topic. They chose from Air, Egypt, Ponds and Food.
These are the results.

E P F E P E A
P E A F E F P
F E P P A F E
E P F A P E E

Make a frequency table and draw a bar chart to show the results.

5 This pictogram shows the number of lollies sold by a shop.



a) How many lollies were sold on Friday?
b) On which day were most lollies sold?
c) How many more lollies were sold on Sunday than on Monday?
d) How many lollies were sold on the four days altogether?

6 Class 3 found that all the cars in a car park were red, blue, white or yellow.
These are the results of their survey.

R W B W R Y R B
B W Y R B W W R
W B R W R W Y W
R W W Y W R B R

Make a frequency table and draw a pictogram to show the results.

TEST 1

1. Write two hundred and fifty-eight in figures.
2. Add 35 to 400.
3. Round 760 to the nearest 100.
4. What is 7 times 5?
5. Write 312 pence as pounds and pence.
6. Take 19 from 65.
7. How many metres make one kilometre?
8. Share 18 by 3.
9. A carton of milk contains one litre. 300 ml is used. How much milk is left?
10. What is 400 more than 230?
11. Double 45.
12. How many days are there in five weeks?
13. How many boxes of four can be made from 24 balls?
14. Holly has two pounds. She spends £1·40. How much has she left?
15. How many quarters make a whole one?
16. Write two and a half litres in millilitres.
17. What is 36 divided by 4?
18. Saheed has 77 marbles. Ryan has 43 marbles less than Saheed. How many marbles does Ryan have?

TEST 2

1. What is the difference between 65 and 100?
2. How many 50 pence pieces make £10?
3. What is seven multiplied by three?
4. Write five hundred and seven in figures.
5. What is the sum of 43 and 25?
6. What is one half of 700?
7. How many grams are there in one and a half kilograms?
8. A television programme starts at 8:10. It lasts 35 minutes. When does it finish?
9. What is 3 less than 400?
10. What is one tenth of 30 pence?
11. Round 68 to the nearest 10.
12. Find the product of 8 and 4.
13. What is 19 more than 27?
14. 25 centimetres is cut from one metre of wood. How much wood is left?
15. What is the cost of five pens at 30 pence each?
16. How many minutes are there in ten hours?
17. How many groups of three can be made from 24 children?
18. There are 58 children in a swimming pool. 21 are boys. How many are girls?