Exam Style Questions

Interpreting Pie Charts

Corbettmaths

Ensure you have: Pencil, pen, ruler, protractor, pair of compasses and eraser
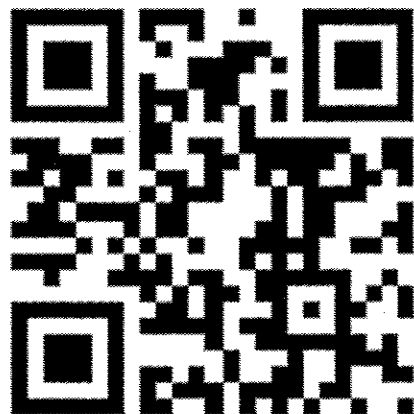
You may use tracing paper if needed

Guidance

1. Read each question carefully before you begin answering it.
2. Don't spend too long on one question.
3. Attempt every question.
4. Check your answers seem right.
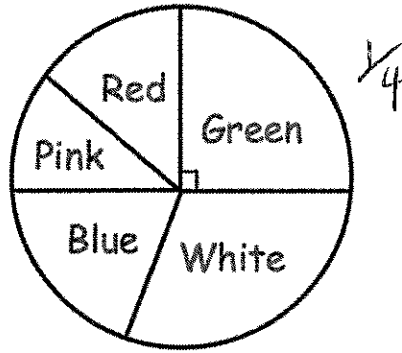5. Always show your workings

Revision for this topic

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Video 164

1. The pie chart shows the colours of 32 beads.

Red
Pink
Green
Blue
White

¼

How many green beads are there?   ¼ of 32

8

(1)

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2. The pie chart shows the colours of cars in a car park.

Red
Black
45°
100°
55° White
75° 85°
Silver
Blue
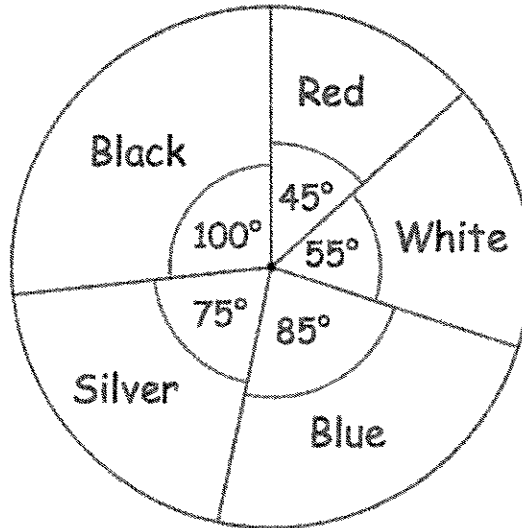
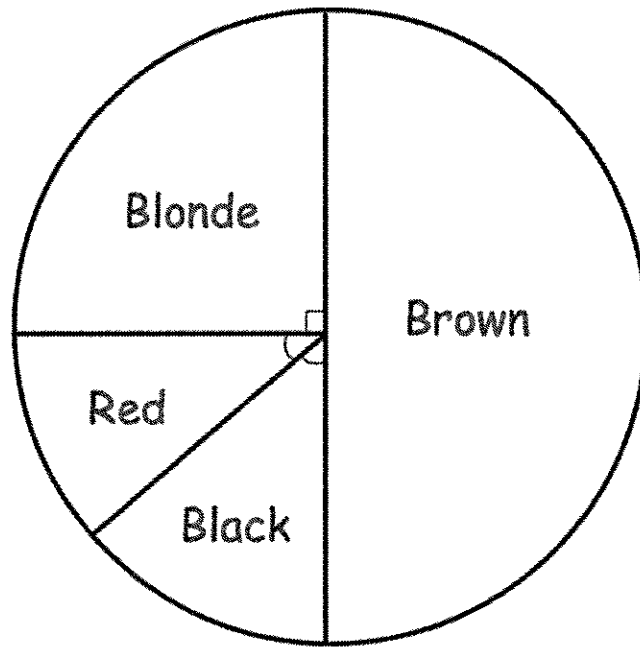(a) What is the most common colour of car in the car park?

Black

(1)

(b) What is the least common colour of car park?

Red

(1)

3. The pie chart shows information about the hair colour of the students in a class.
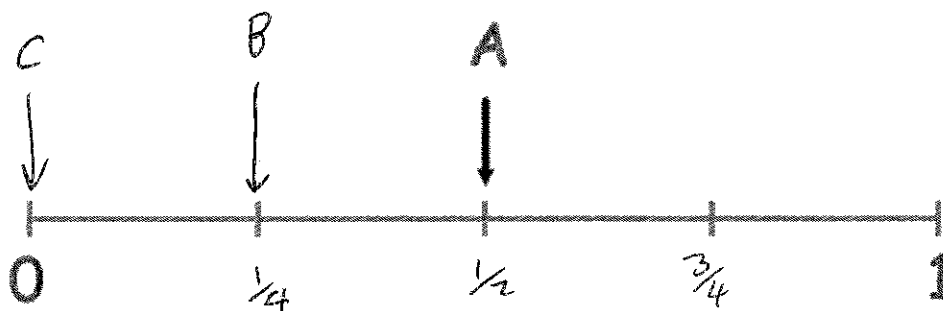

A student from the class is chosen at random.

(a) Mark, with the letter, the probabilities of each of the following on the scale below.
The first one has been done for you.

    A: The student has brown hair.
    B: The student has blonde hair.
    C: The student has green hair.

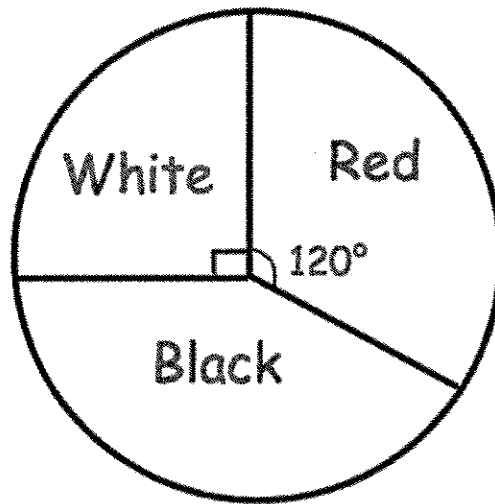**(2)**

There are 24 students in the class

(b) How many students have blonde hair? $\frac{1}{4}$ of 24

                                                    6

                                                 ....

(1)

4. A bag contains red, white and black counters.

The pie chart shows information about the counters in the bag.

(a) What fraction of the counters are white?
    Give your answer in its simplest form.

$\frac{90}{360} = \frac{1}{4}$

$\frac{1}{4}$
....
(2)

(b) What fraction of the counters are red?
    Give your answer in its simplest form.

$\frac{120}{360} = \frac{1}{3}$

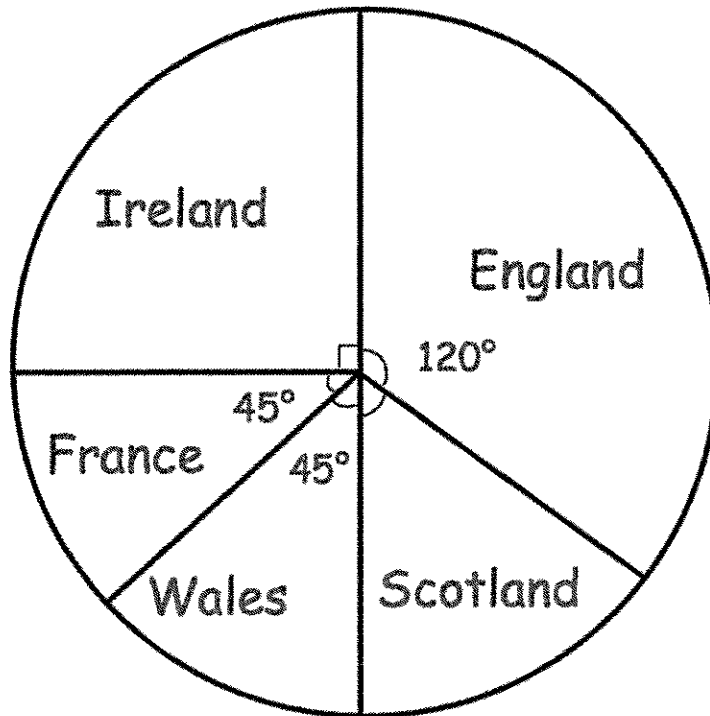$\frac{1}{3}$
....
(2)

There are 24 counters in the bag.

(c) Work out how many counters are black.

white $\frac{1}{4}$ of 24 = 6

red $\frac{1}{3}$ of 24 = 8

black   24 - 14 = 10

10
....
(2)

5. A group of rugby fans were asked who they supported.
The pie chart and table show information about who they support.

Use the pie chart to complete the table.

Team	Angle of sector	Number of fans
England	120°	16
Scotland	60°	8
Wales	45°	6
France	45°	6
Ireland	90°	12

$90° = 120$ fans
$180° = 240$ fans
$360° = 480$ fans
England $\frac{1}{3}$ of $480 = 160$
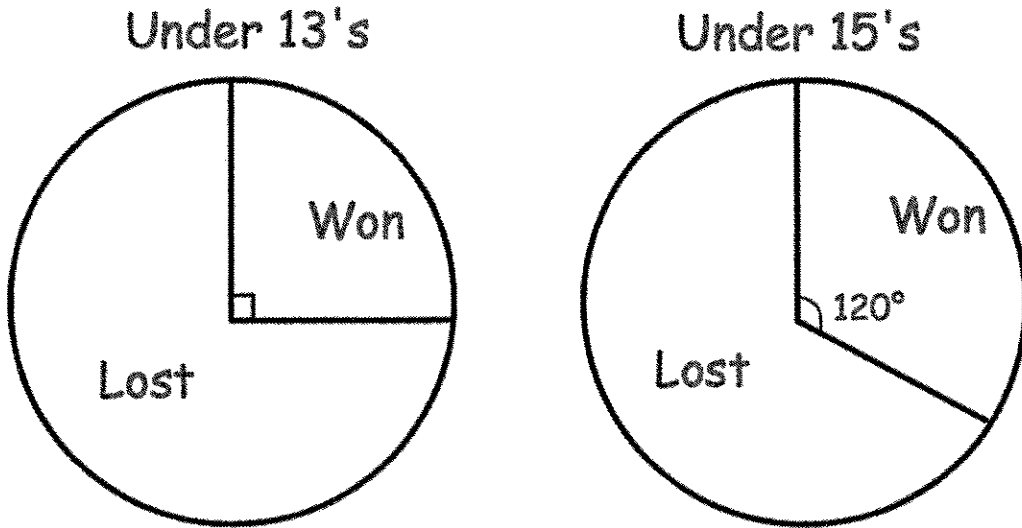Scotland $\frac{1}{6}$ of $48 = 8$

(4)

6. A youth club has two rugby teams, Under 13's and Under 15's.

The pie charts show information about the number of games each team won and lost, last season.

Under 13's
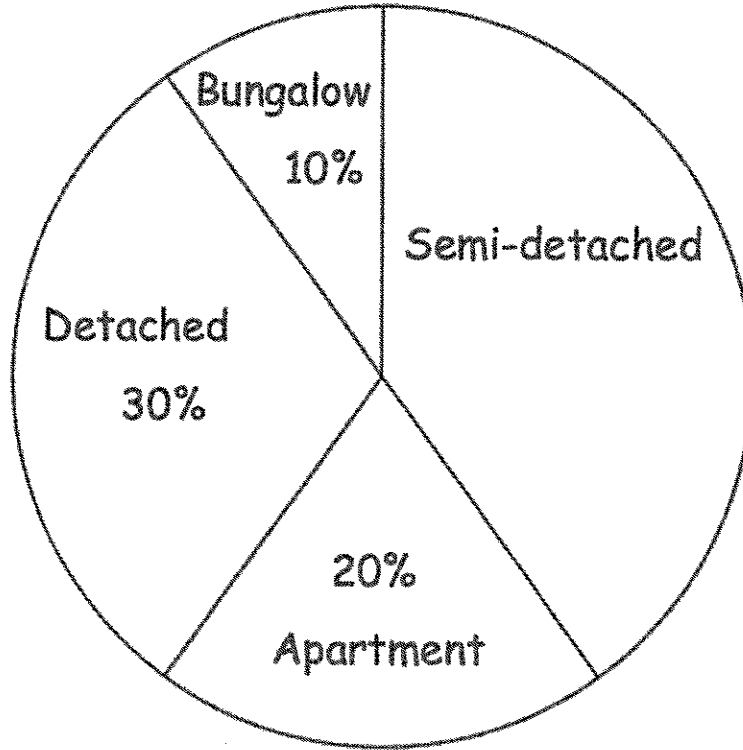

Under 15's

The Under 13's played 28 matches.
The Under 15's played 18 matches.

Which team won more matches?
Show your workings.

Under 13's
Won 28 ÷ 4 = 7 matches

Under 15's
Won 18 ÷ 3 = 6 matches

............Under 13's............

(3)

7.   The pie chart shows types of properties in a street with 80 properties.

(a) Work out the percentage of properties that are semi-detached.
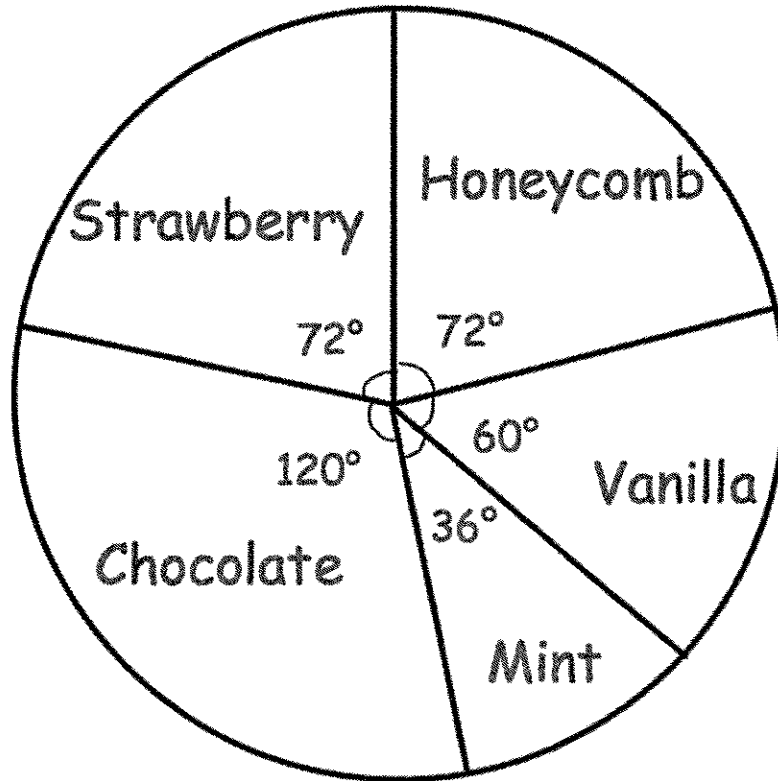
$30 + 20 + 10 = 60$

$100 - 60 = 40\%$

.............40.............%

(2)

(b) Work out the number of semi-detached properties.

$40\% \text{ of } 80 = 32$

$10\% = 8$

.............32.............

(2)

8. The pie chart shows the flavours of ice cream sold by a shop in one day.
There were a total of 270 ice creams sold.

(a) Calculate the number of vanilla flavoured ice creams sold.

$$\frac{60}{360} = \frac{1}{6} \qquad 270 \div 6 =$$

.... 45 ....

(2)

(b) Calculate the number of mint flavoured ice creams sold.

$$\frac{36}{360} = \frac{1}{10} \qquad 270 \div 10$$

.... 27 ....

(2)

(c) Calculate the number of strawberry flavoured ice creams sold.

$$\frac{72}{360} = \frac{1}{5} \qquad 270 \div 5$$

.... 54 ....
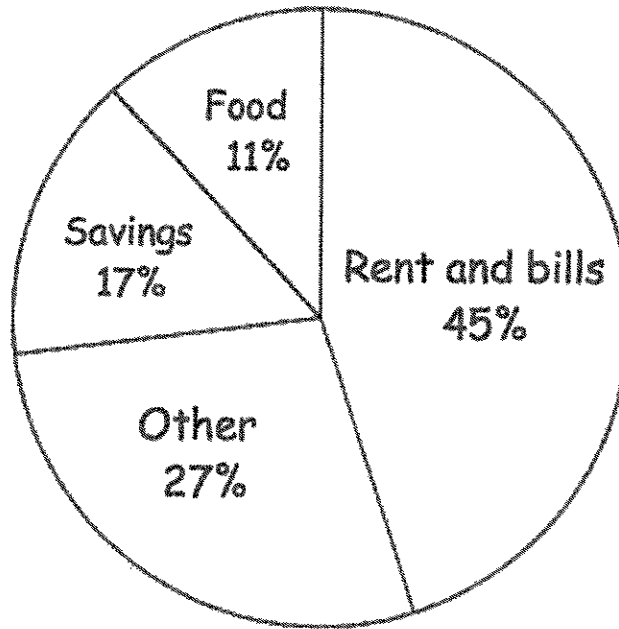
(2)

9. The pie chart shows information about how Mr.Jenkins spent his salary for July.

He was paid £2000 in July.

Work out how much Mr.Jenkins spent on rent and bills.

45% of 2000

10% = 200
10% = 200
10% = 200
10% = 200
5% = 100
+
900

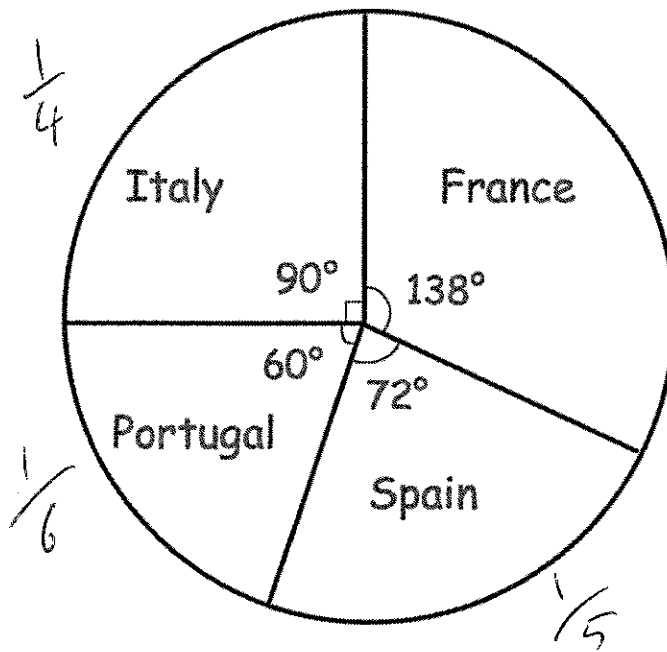£ 900

(2)

10. The pie chart shows the holiday destinations of 60 people.

$\frac{1}{4}$

Italy

France

90° 138°

60°

72°

Portugal

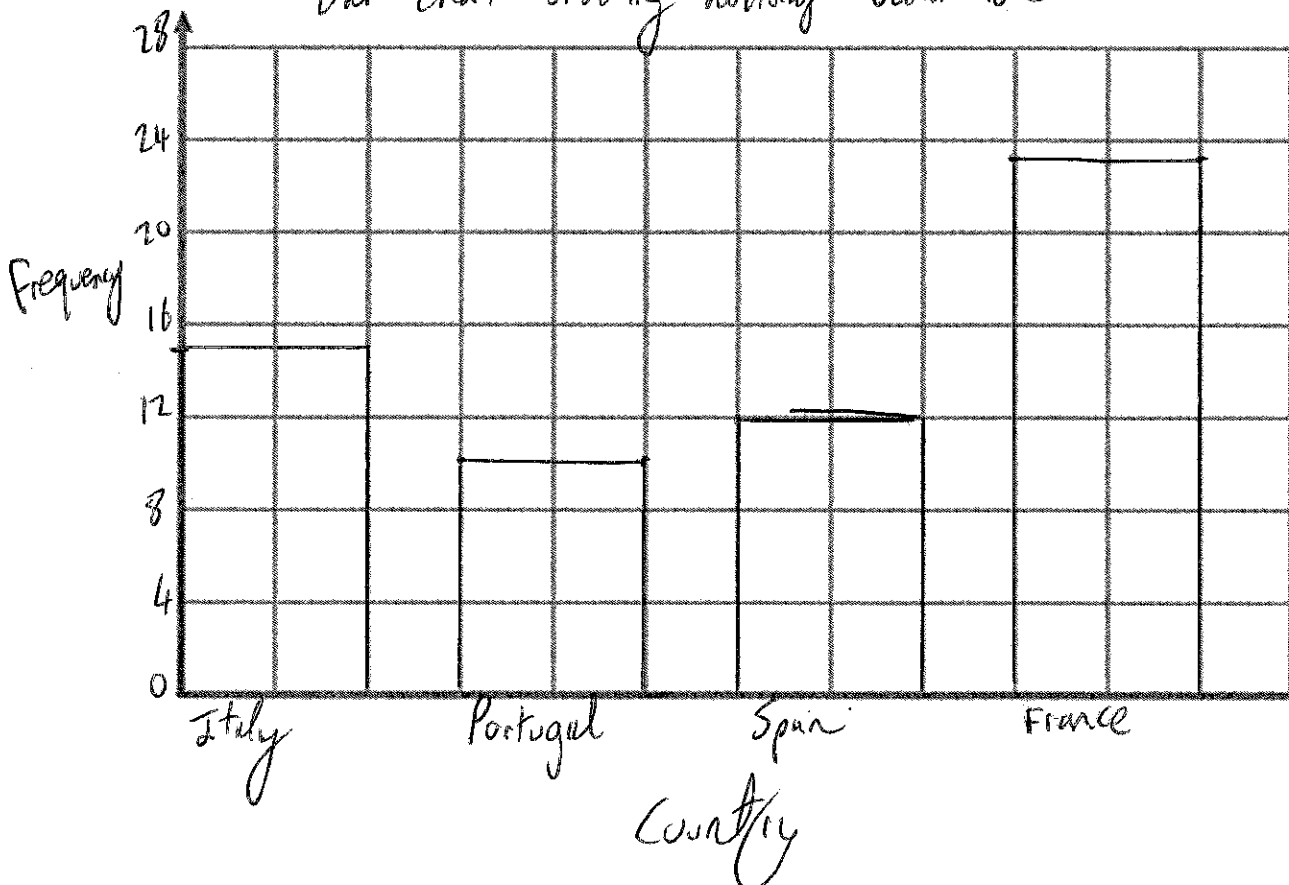$\frac{1}{6}$

Spain

$\frac{1}{5}$

Draw a bar chart to represent this information.

Italy $\frac{1}{4}$ of 60 = 15

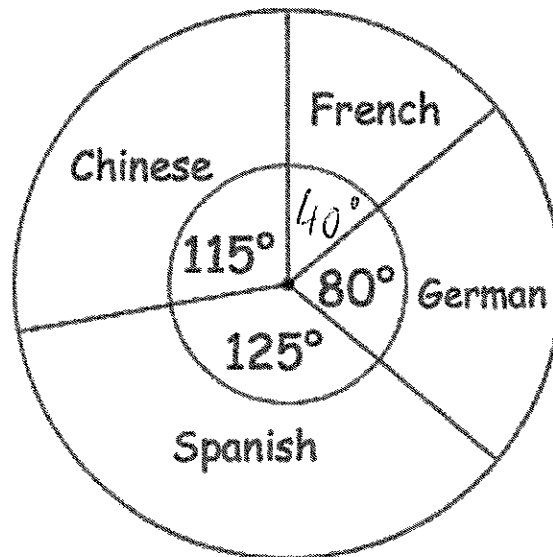Portugal $\frac{1}{6}$ of 60 = 10

Spain $\frac{1}{5}$ of 60 = 12

France 60 − 37 = 23

$\begin{array}{r} + \\ \hline 37 \end{array}$

Bar chart showing holiday destinations

Frequency

28
24
20
16
12
8
4
0

Italy   Portugal   Spain   France

Country

(4)

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11. The pie chart shows information about the languages studied in a school.
There are 648 students in the school.
Each student studies one language.

$360 - (115 + 125 + 80)$
$= 40$

How many more students study Chinese than French?

Chinese $\frac{115}{360}$ of $648 = 207$.

French $\frac{40}{360}$ of $648 = 72$

$207 - 72 = 135$

135
....

(4)

12. The pie charts show information about the results of chess matches that two players have played in over the course of a year.
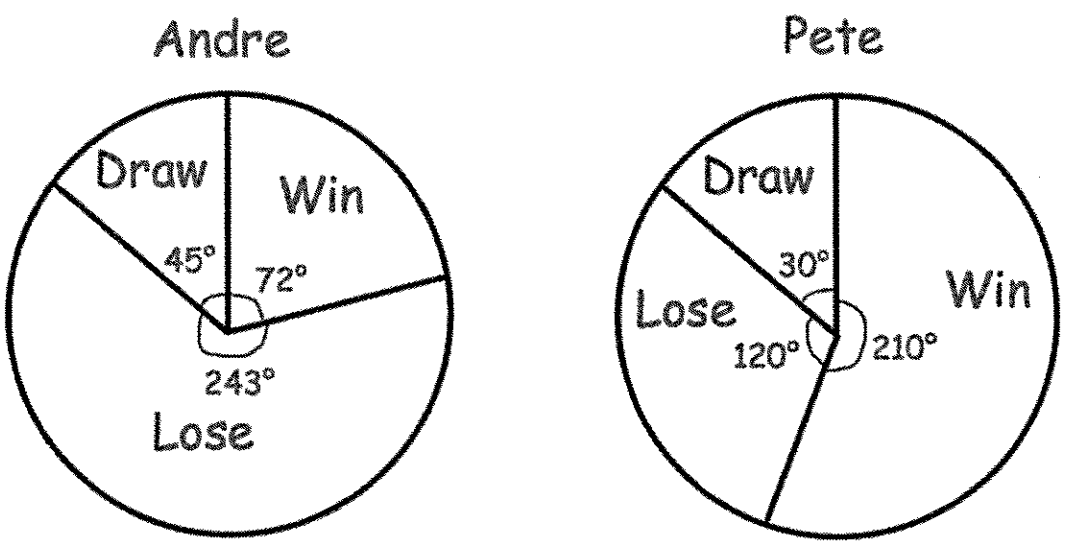
Andre

Pete

Andre drew 5 matches.

(a) How many matches did Andre win?

$45° = 5$ matches
$90° = 10$ matches
$180° = 20$ matches
$360° = 40$ matches

Win $\frac{72}{360} = \frac{1}{5}$

$\frac{1}{5}$ of $40 = 8$

.... 8

(2)

Edward says "the pie charts show that Pete won more matches than Andre."

(b) Is Edward correct?
You must explain your answer.

As we do not know how many matches Pete played, we do not know how many he won. He won a higher proportion of matches he played but we do not know enough information to find the total matches won by Pete.

(1)

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