Name:

Exam Style Questions

Drawing Pie Charts

Corbettmaths

Equipment needed: Ruler, pencil, protractor, pen, calculator

Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Video Tutorial

www.corbettmaths.com/contents

Video 163

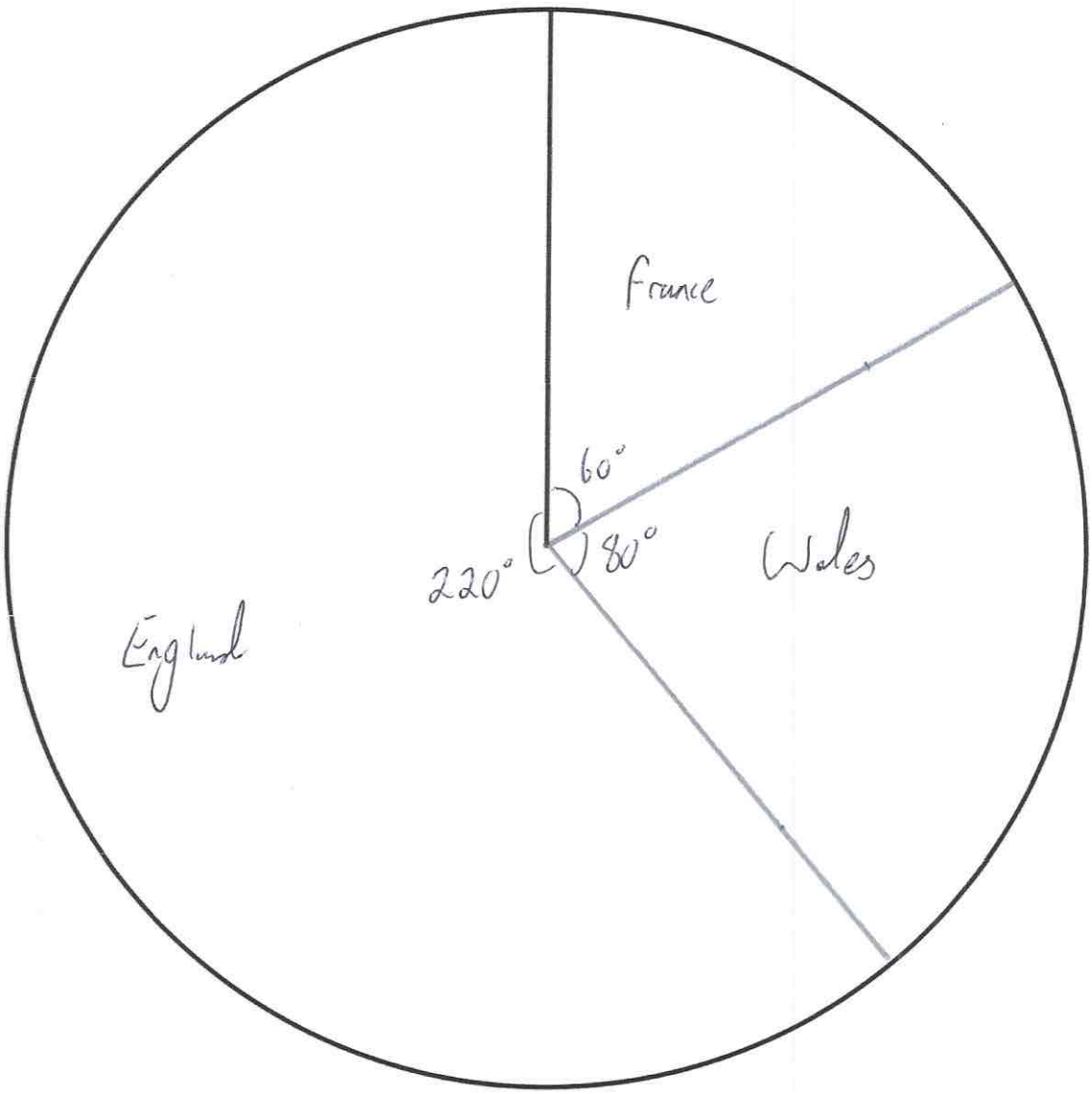
Answers and Video Solutions

1. The table gives information about the holiday destination of 18 students in a class.

Country	Frequency	Angle
France	3 x20	60°
Wales	4 x20	80°
England	11 x20	220°
	18	360°

Draw an accurate pie chart to show this information.

360 ÷ 18 = 20° per student



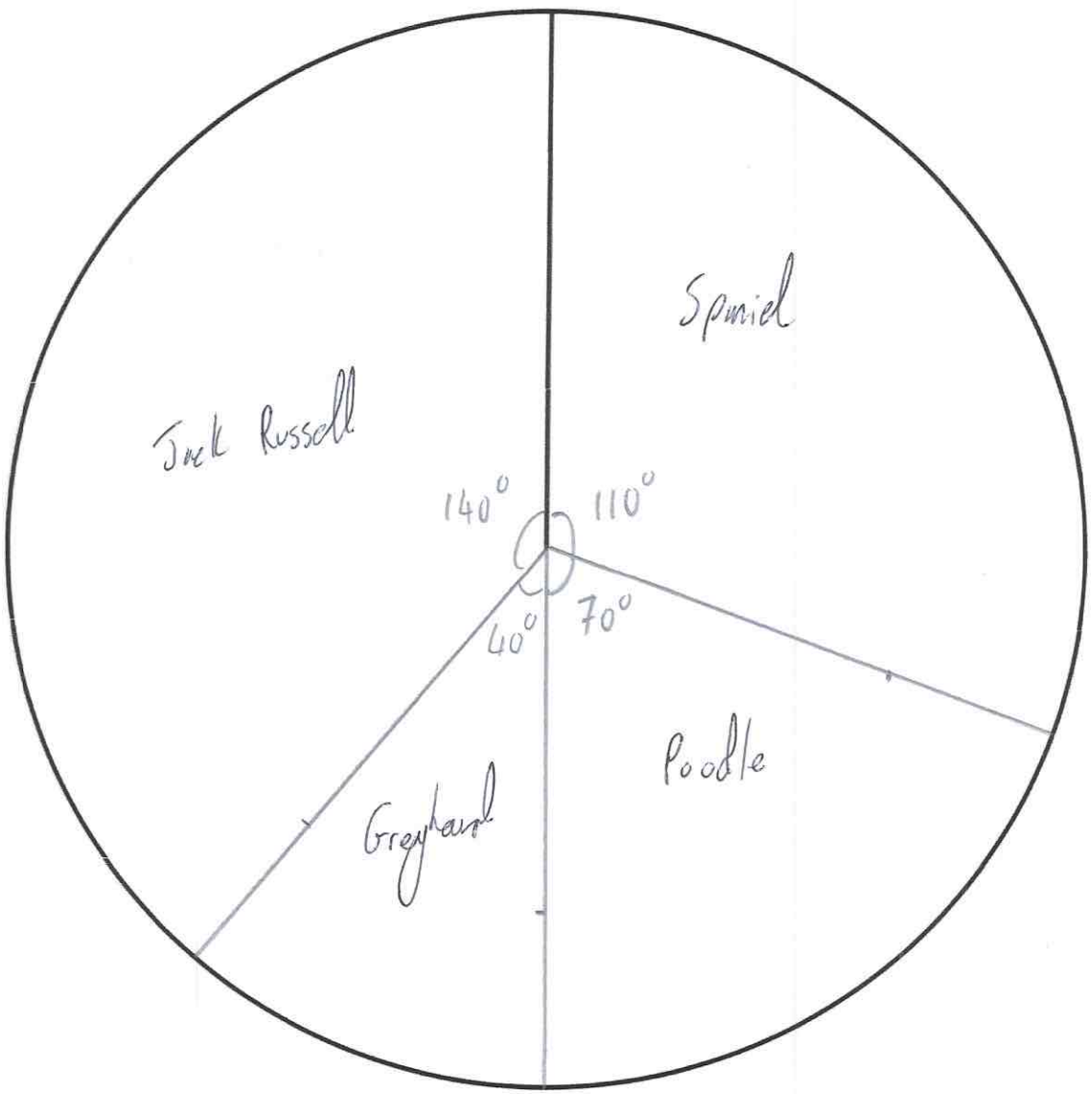
(4)

2. The table gives information about the dogs in a village

Breed	Frequency	Angle
Spaniel	11	110°
Poodle	7	70°
Greyhound	4	40°
Jack Russell	14	140°
	36	360°

360 ÷ 36 = 10° per dog

Draw an accurate pie chart to show this information.



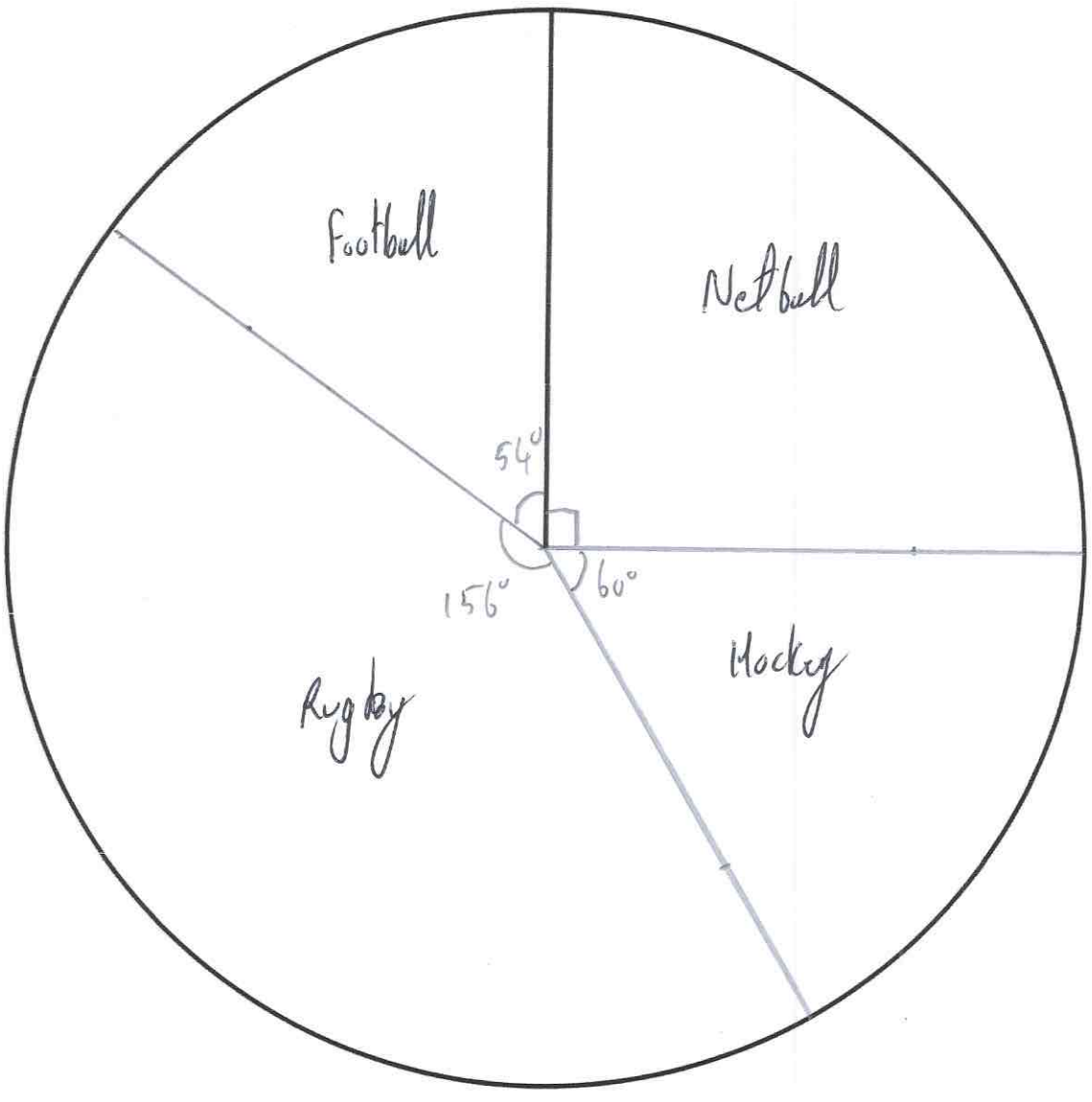
(4)

3. The table gives information about students staying after school to play sport.

Sport	Frequency	Angle
Netball	15 x 6	90°
Hockey	10 x 6	60°
Rugby	26 x 6	156°
Football	9 x 6	54°
	60	360°

Draw an accurate pie chart to show this information.

360 ÷ 60 = 6° per student



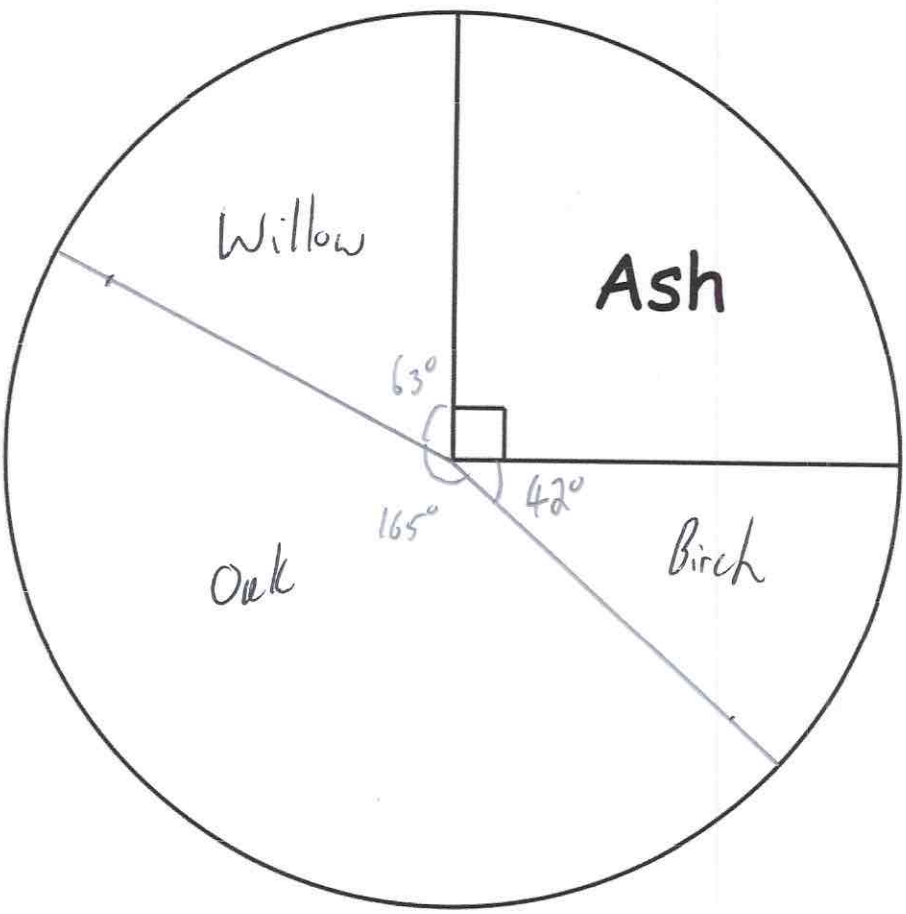
(4)

4. There are four types of tree planted in a new park.

Type of Tree	Number Planted	Angle
Ash	30 x 3	90°
Birch	14 x 3	42°
Oak	55 x 3	165°
Willow	21 x 3	63°
	120	+ 360°

Complete the pie chart for the information in the table.

360 ÷ 120 = 3° per tree



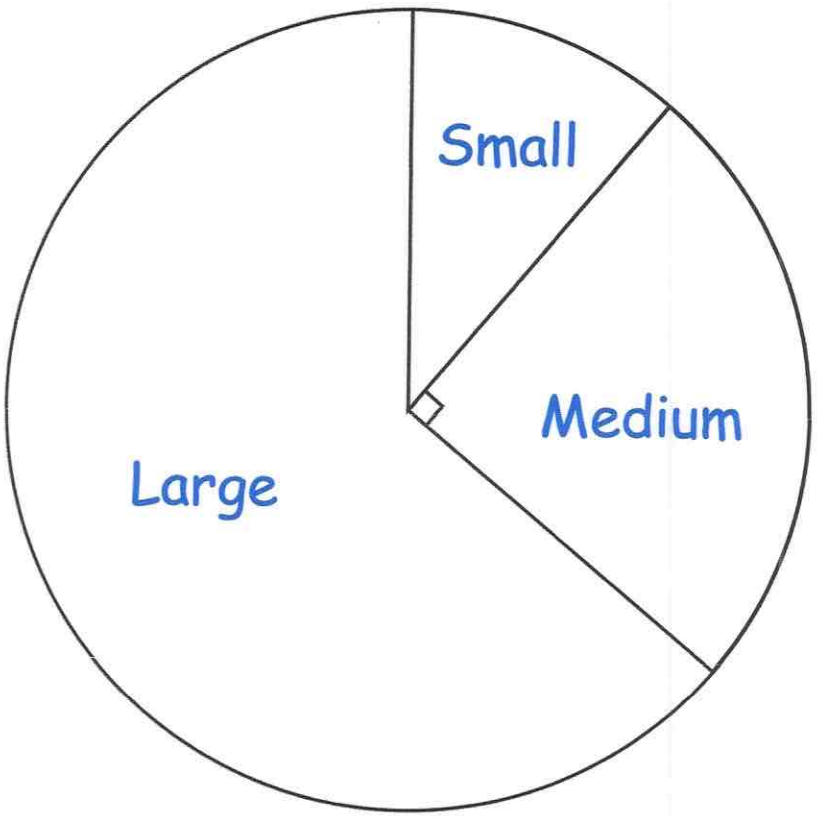
(4)

5. A cinema sells popcorn in three different size bags.

Size	Number Sold
Small	20
Medium	90
Large	70

180

The manager of the cinema draws a pie chart to represent this information.



360 ÷ 180 = 2

90 × 2 = 180°.

Give a criticism of the pie chart.

More medium bags were sold than large bags, so the angle for the "medium" sector should be bigger than the "large" sector.

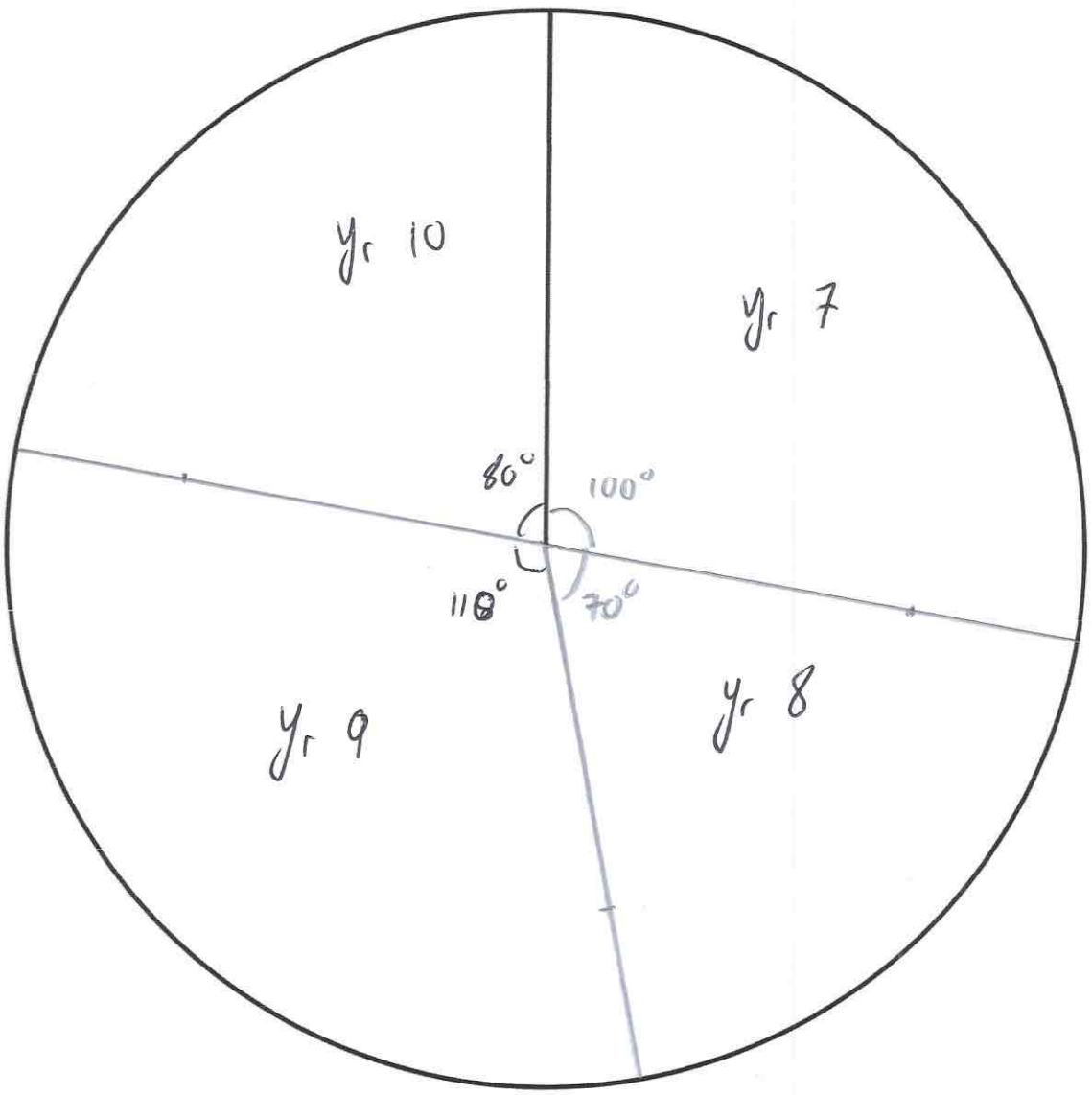
The angle for "medium" should be 180°. (1)

6. The table gives information about the number of students in years 7 to 10.

Year	Frequency	Angle
7	200 $\times 0.5$	100°
8	140 $\times 0.5$	70°
9	220 $\times 0.5$	110°
10	160 $\times 0.5$	80°
	720	360°

Draw an accurate pie chart to show this information.

$360 \div 720 = 0.5^\circ$ per student.



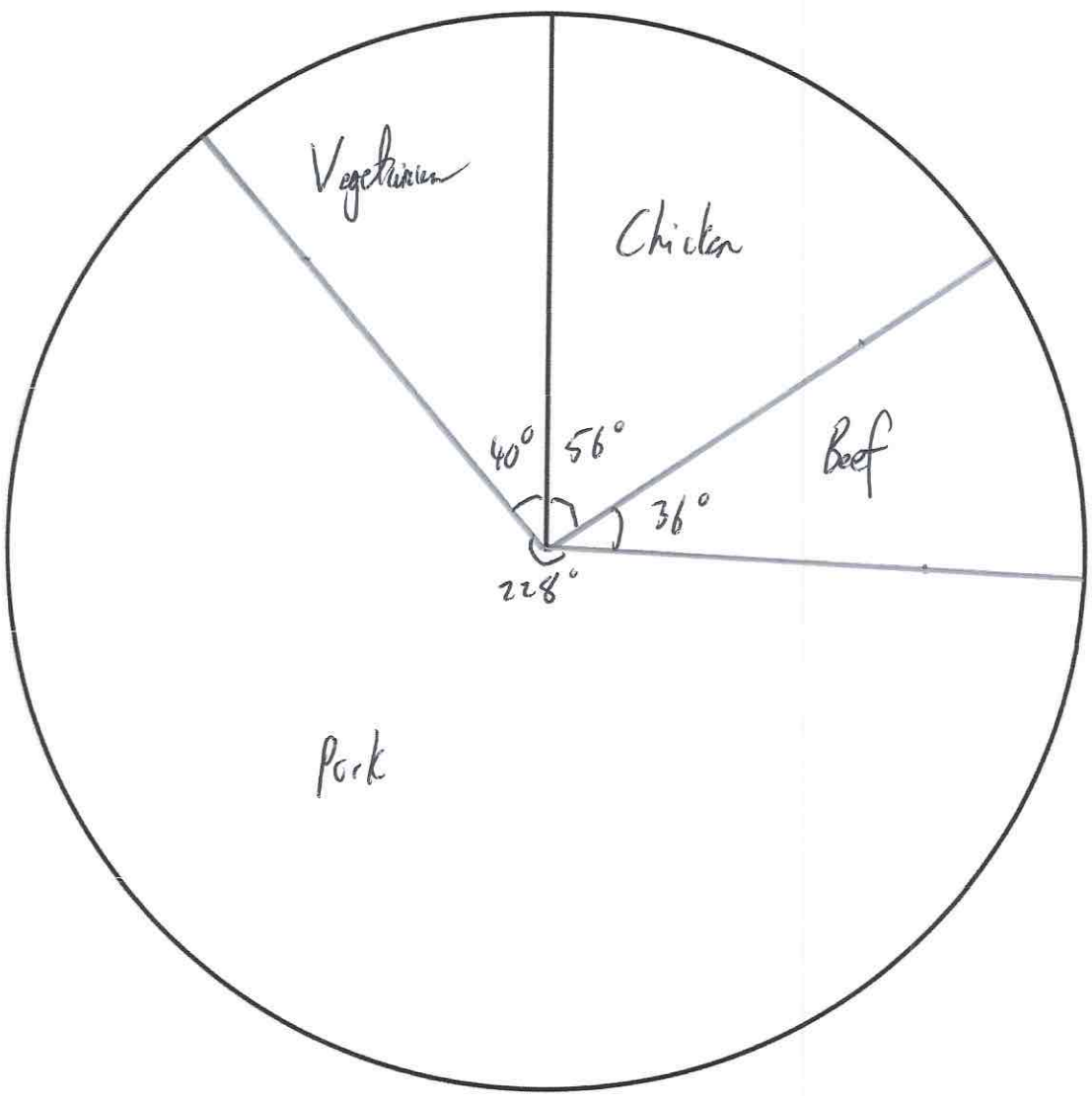
(4)

7. The table gives information about the meals ordered on a Sunday.

Meal	Frequency	Angle
Chicken	14 x4	56°
Beef	9 x4	36°
Pork	57 x4	228°
Vegetarian	10 x4	40°
	90	360°

360 ÷ 90 = 4° per meal.

Draw an accurate pie chart to show this information.



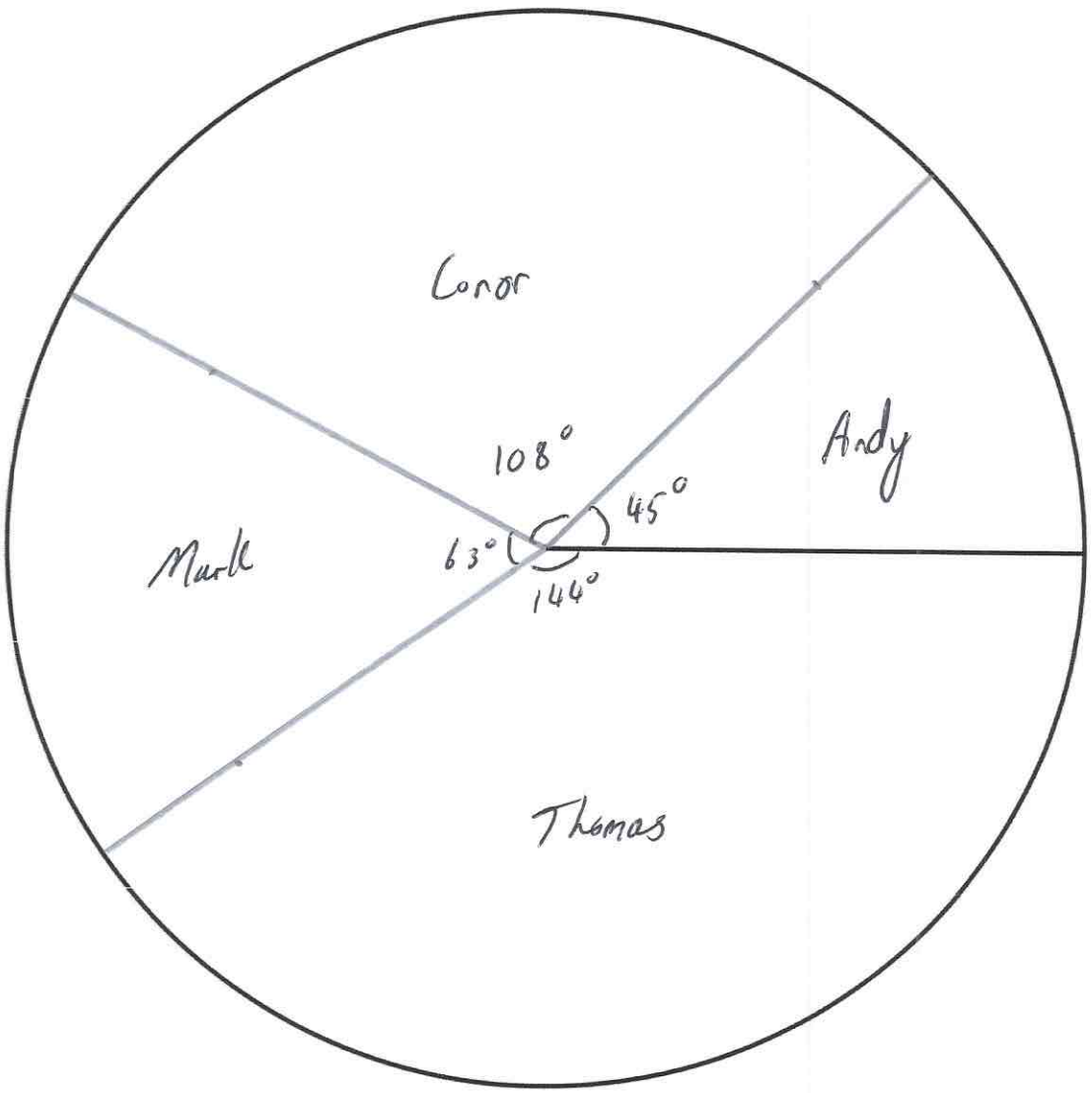
(4)

8. A football coach records the number of tackles made by 4 defenders during a match.

Defender	Tackles Made	Angle
Andy	25 $\times 1.8$	45°
Conor	60 $\times 1.8$	108°
Mark	35 $\times 1.8$	63°
Thomas	80 $\times 1.8$	144°
	200	360°

Draw a pie chart to show this information.

$360 \div 200 = 1.8^\circ$ per tackle



(4)

9. Jannik draws a pie chart to represent the colours of colours in a box.

$\frac{1}{3}$ of the counters in a box are green.

Circle the angle of the sector for the green counters

30° 60° 120° 300°

$\frac{1}{3}$ of 360 = 120°

(1)

10. In a pie chart, one sector represents 10% of the data.

Circle the angle of that sector.

3.6° 10° 18° 36°

10% of 360 = 36

(1)

11. A pie chart is drawn to represent the colour of the cars in a car park.

The sector for the white cars is 72°

What fraction of the cars in the car park are white?
Give your answer in its simplest form.

$\frac{72}{360} = \frac{36}{180} = \frac{18}{90} = \frac{9}{45} = \frac{3}{15} = \frac{1}{5}$

$\frac{1}{5}$

(2)

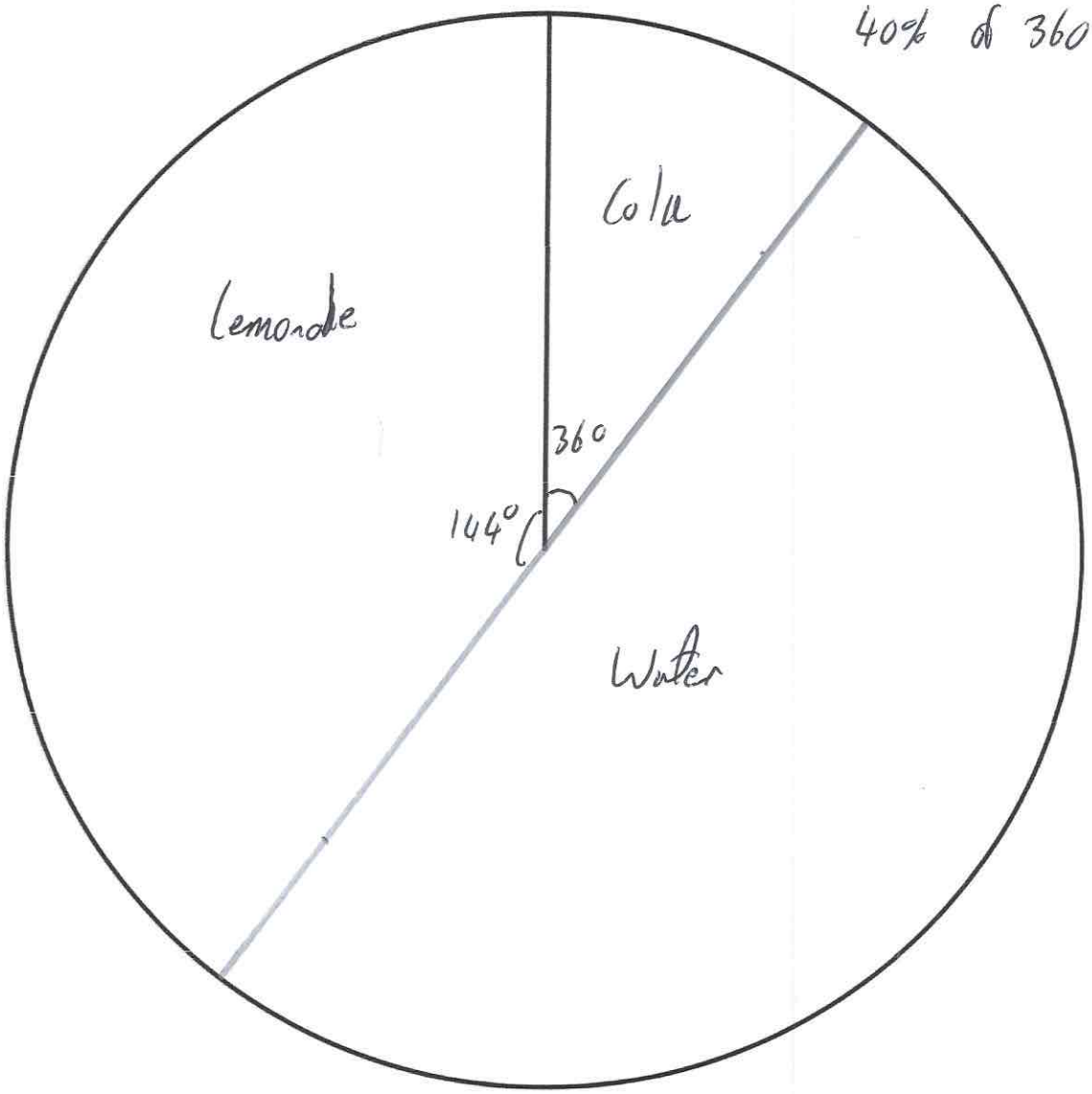
12. Nigel sells bottles of drinks.

The table shows the percentage of drinks sold on a day.

Drink	Percentage	Angle
Cola	10%	36°
Water	50%	180°
Lemonade	40%	144°

Draw an accurate pie chart to show this information.

10% of 360 = 36
50% of 360 = 180
40% of 360 = 144



(4)

13. 40 people are surveyed about their opinion of a new road.
The council want to show their responses in a pie chart.

29 of the people said the new road was "excellent".

Work out the size of the angle for the "excellent" sector in the pie chart.

$360 \div 40 = 9°$ per person

$29 \times 9 = 261°$

261 .....°

(2)

---

14. A tub contains 72 counters.
The counters are either red, yellow, pink, blue or green.

Donnacha is going to draw a pie chart to represent the colours of the counters.

The table below shows some information.

Colour	Number in Tub	Angle
Red	33	165°
Yellow	11	55°
Pink	19	95°
Blue	4	20°
Green	5	25°

Complete the table.

$360 \div 72 = 5°$ per counter.

$11 + 19 + 4 + 5 = 39$

$72 - 39 = 33$

(4)

15. How Katie allocates her wages is shown in the table below.

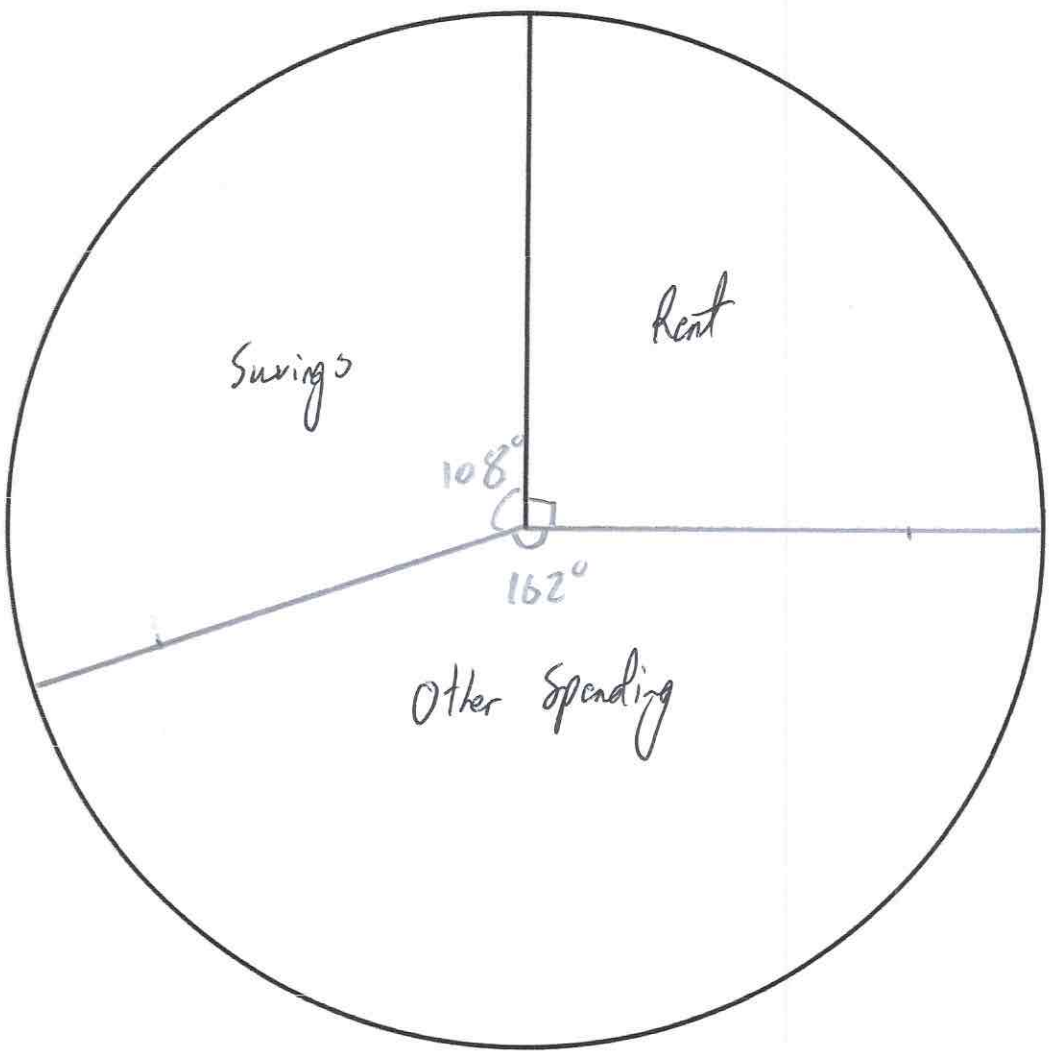
	Percentage	Angle in Pie Chart
Rent	25%	90°
Other Spending	45%	162°
Savings	30 %	108°

(a) Complete the table.

45% of 360 = 162
30% of 360 = 108

(3)

(b) Draw an accurate pie chart to show this information.



(4)

16. A running club has 240 members.

$\frac{2}{5}$ of the members are **senior** runners.

80 of the members **veteran** runners.

The rest of the runners are **junior** runners.

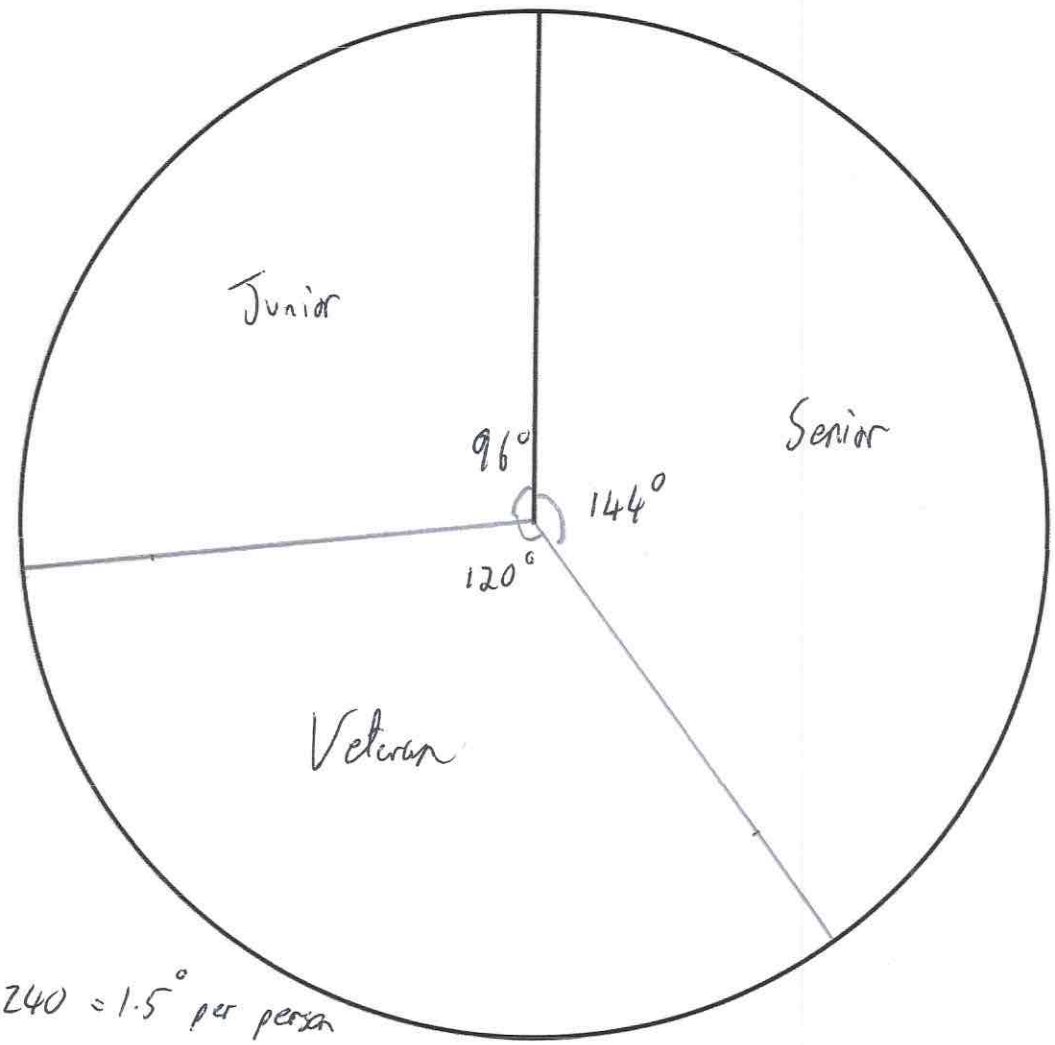
Draw and label a pie chart to show this information.

$\frac{2}{5}$ of $360 = 144°$

$\frac{80}{240} = \frac{1}{3}$ $\frac{1}{3}$ of $360 = 120°$

$144 + 120 = 264$

$360 - 264 = 96°$



$360 \div 240 = 1.5°$ per person

or

$\frac{2}{5}$ of $240 = 96$

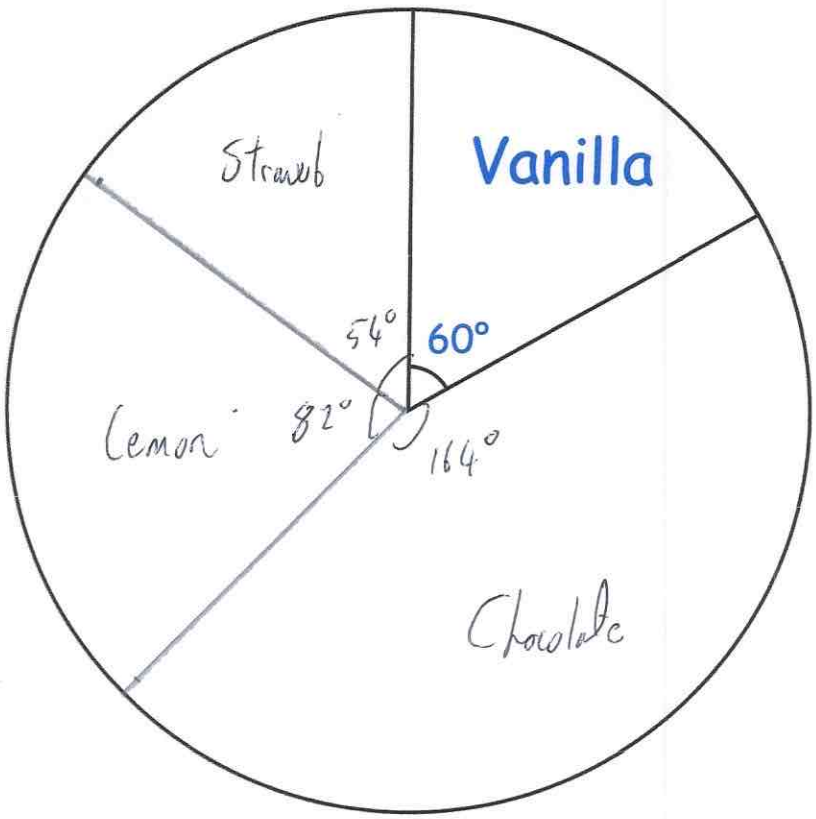
$96 + 80 = 176$

$240 - 176 = 64$

$64 \times 1.5 = 96°$

(4)

17. A bakery makes vanilla, chocolate, lemon and strawberry cupcakes.
The baker wants to draw a pie chart to represent the cupcakes made last week.
The sector for the vanilla cupcakes has been drawn.



15% of the cupcakes made last week were strawberry.

The ratio of chocolate cupcakes to lemon cupcakes made last week is 2:1

Complete the pie chart.

15% of 360 = 54° (strawberry)

360 - 60 - 54 = 246

1 + 2 = 3

246 ÷ 3 = 82° (lemon)

82 × 2 = 164° (chocolate)

(4)