

Drawing Pie Charts

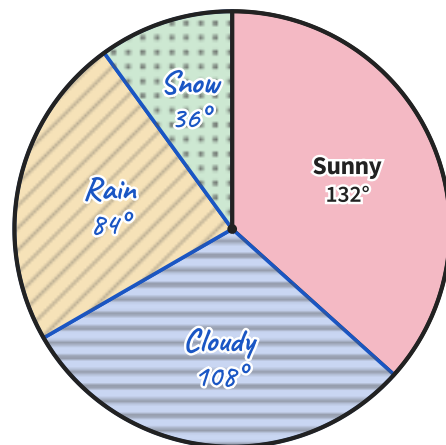
ANSWERS

1

Ellie recorded the weather for 30 days.

- Total frequency: 30
- Degrees each: $360^\circ \div 30 = 12^\circ$
- Check the angles add up to 360° .
- Draw the pie chart.

	Frequency	Angle
Sunny	11	$11 \times 12 = 132^\circ$
Cloudy	9	$9 \times 12 = 108^\circ$
Rain	7	$7 \times 12 = 84^\circ$
Snow	3	$3 \times 12 = 36^\circ$
Total	30	360°

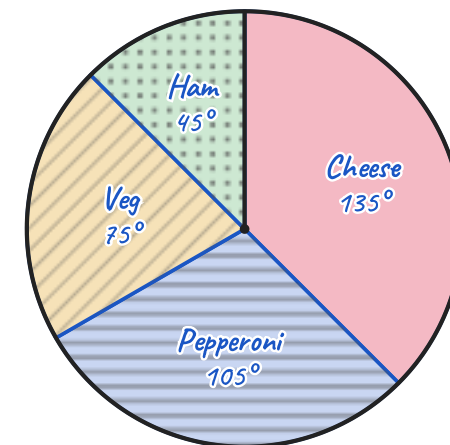


2

24 people chose a pizza topping.

- Total frequency: 24
- Degrees each: $360^\circ \div 24 = 15^\circ$
- Complete the angle column. The angles add up to 360° .
- Draw the pie chart.

	Frequency	Angle
Cheese	9	$9 \times 15 = 135^\circ$
Pepperoni	7	$7 \times 15 = 105^\circ$
Veg	5	$5 \times 15 = 75^\circ$
Ham	3	$3 \times 15 = 45^\circ$
Total	24	360°

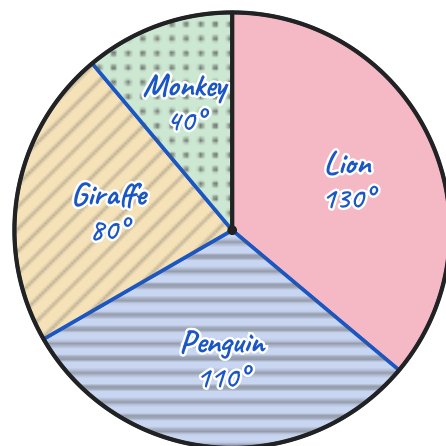


3

Some zoo visitors chose their favourite animal.

- Total frequency: 36
- Degrees each: $360^\circ \div 36 = 10^\circ$
- Complete the angle column. The angles add up to 360° .
- Draw the pie chart.

	Frequency	Angle
Lion	13	$13 \times 10 = 130^\circ$
Penguin	11	$11 \times 10 = 110^\circ$
Giraffe	8	$8 \times 10 = 80^\circ$
Monkey	4	$4 \times 10 = 40^\circ$
Total	36	360°

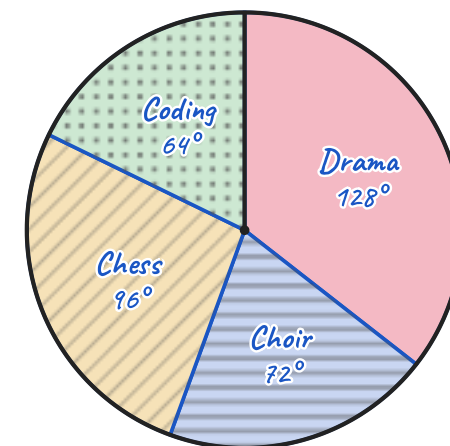


4

Some students chose an after school club.

- Total frequency: 45
- Degrees each: $360^\circ \div 45 = 8^\circ$
- Complete the angle column. The angles add up to 360° .
- Draw the pie chart.

	Frequency	Angle
Drama	16	$16 \times 8 = 128^\circ$
Choir	9	$9 \times 8 = 72^\circ$
Chess	12	$12 \times 8 = 96^\circ$
Coding	8	$8 \times 8 = 64^\circ$
Total	45	360°



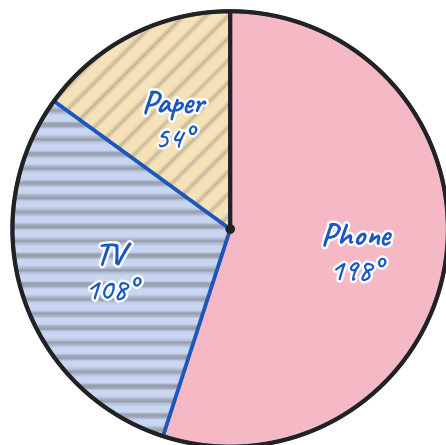
Drawing Pie Charts

ANSWERS

5

60 people said where they get their news.
Draw a pie chart.

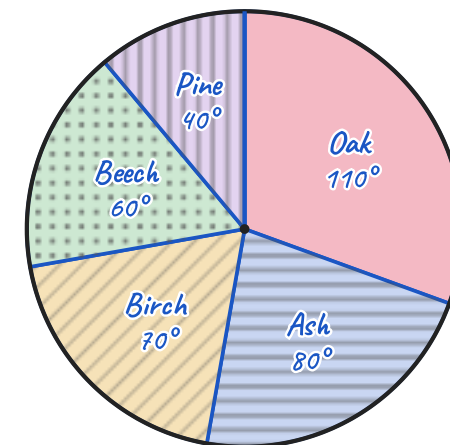
	Frequency	Angle
Phone	33	$33 \times 6 = 198^\circ$
TV	18	$18 \times 6 = 108^\circ$
Paper	9	$9 \times 6 = 54^\circ$
Total	60	360°



6

The trees in a park are counted.
Draw a pie chart. Draw your own start line.

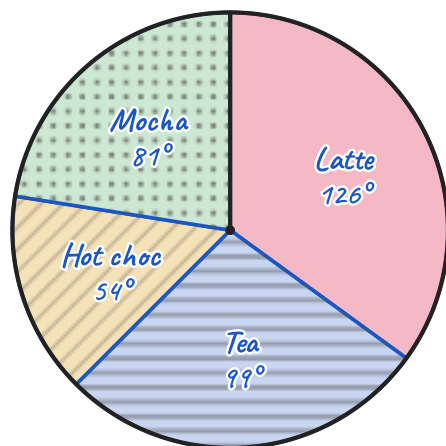
	Frequency	Angle
Oak	22	$22 \times 5 = 110^\circ$
Ash	16	$16 \times 5 = 80^\circ$
Birch	14	$14 \times 5 = 70^\circ$
Beech	12	$12 \times 5 = 60^\circ$
Pine	8	$8 \times 5 = 40^\circ$
Total	72	360°



7

A café sold 40 hot drinks one morning.
14 were lattes, 11 were teas and 6 were hot chocolates. The rest were mochas.
Complete the table, then draw a pie chart.

	Frequency	Angle
Latte	14	$14 \times 9 = 126^\circ$
Tea	11	$11 \times 9 = 99^\circ$
Hot choc	6	$6 \times 9 = 54^\circ$
Mocha	9	$9 \times 9 = 81^\circ$
Total	40	360°

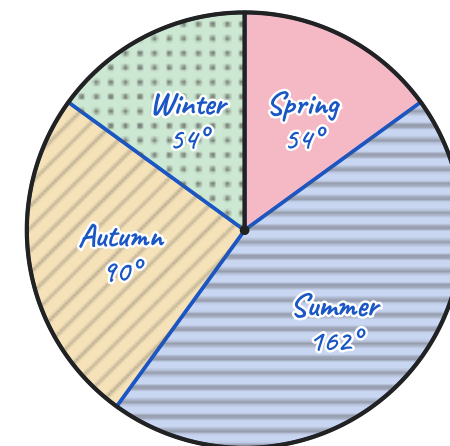


8

Ravi asked 20 people their favourite season. He says the angle for Summer is 9° .

- a) Explain why Ravi is wrong.
He used the frequency as the angle.
Each person is $360^\circ \div 20 = 18^\circ$, so
Summer is $9 \times 18 = 162^\circ$.
- b) Draw the pie chart.

	Frequency	Angle
Spring	3	$3 \times 18 = 54^\circ$
Summer	9	$9 \times 18 = 162^\circ$
Autumn	5	$5 \times 18 = 90^\circ$
Winter	3	$3 \times 18 = 54^\circ$
Total	20	360°



Drawing Pie Charts *further practice*

ANSWERS

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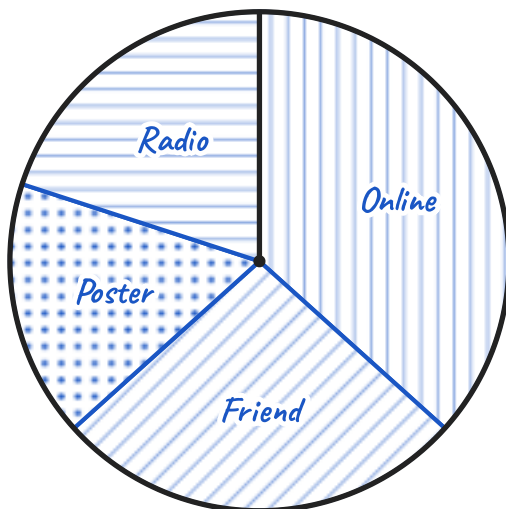


The table shows how 30 visitors heard about a museum.

Draw a pie chart.

	Frequency	Angle
Online	11	132°
Friend	8	96°
Poster	5	60°
Radio	6	72°
Total	30	360°

$$360^\circ \div 30 = 12^\circ \text{ for each one}$$



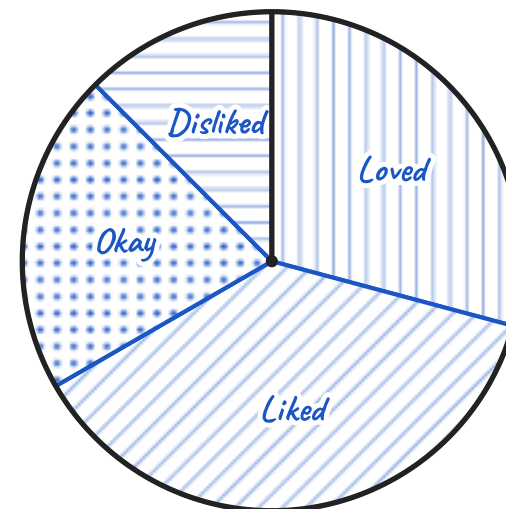
10



The members of a book club rated a novel. Draw a pie chart.

	Frequency	Angle
Loved	7	105°
Liked	9	135°
Okay	5	75°
Disliked	3	45°
Total	24	360°

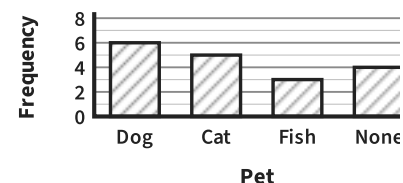
$$360^\circ \div 24 = 15^\circ \text{ for each one}$$



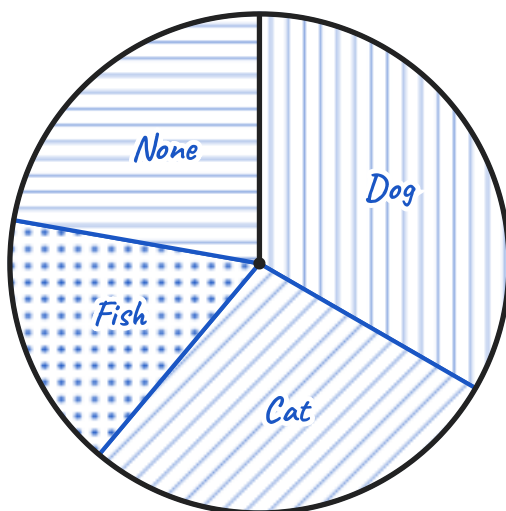
11



The bar chart shows the pets of some students. Complete the table, then draw a pie chart.



	Frequency	Angle
Dog	6	120°
Cat	5	100°
Fish	3	60°
None	4	80°
Total	18	360°



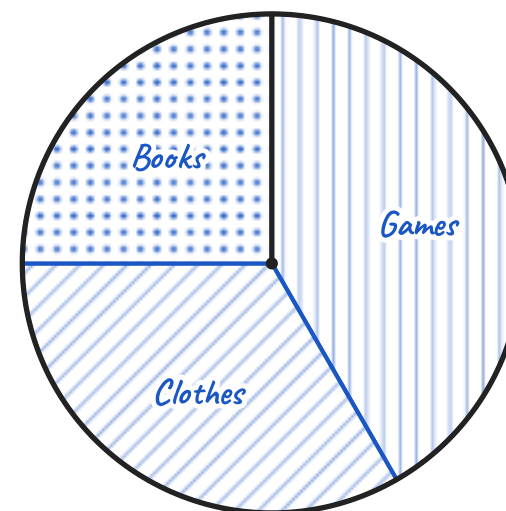
12



Freya spent her £72 of birthday money like this. Draw a pie chart to show how she spent it.

	Amount	Angle
Games	£30	150°
Clothes	£24	120°
Books	£18	90°
Total	£72	360°

$$360^\circ \div 72 = 5^\circ \text{ for each £1}$$



Drawing Pie Charts *further practice*

ANSWERS

13



The pie chart shows the clubs 40 students chose.

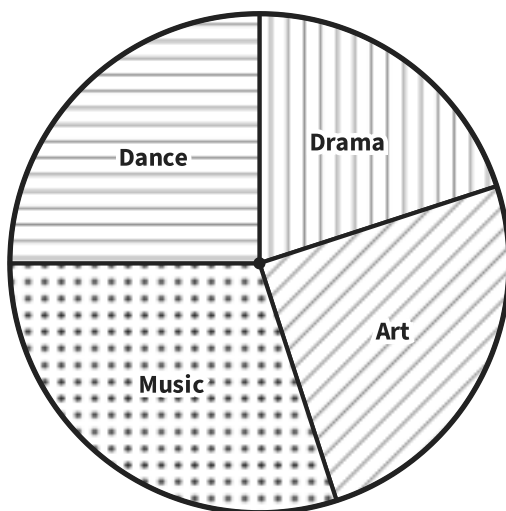
Measure the angles you need.

How many chose drama?

$$72^\circ \div 9^\circ = 8$$

How many chose music?

$$108^\circ \div 9^\circ = 12$$



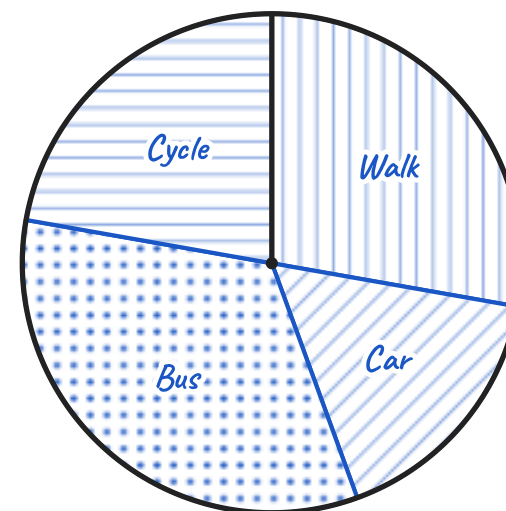
14



Some students said how they get to school. Complete the table, then draw the pie chart.

	Frequency	Angle
Walk	10	100°
Car	6	60°
Bus	12	120°
Cycle	8	80°
Total	36	360°

100° for 10 students: 10° each



15

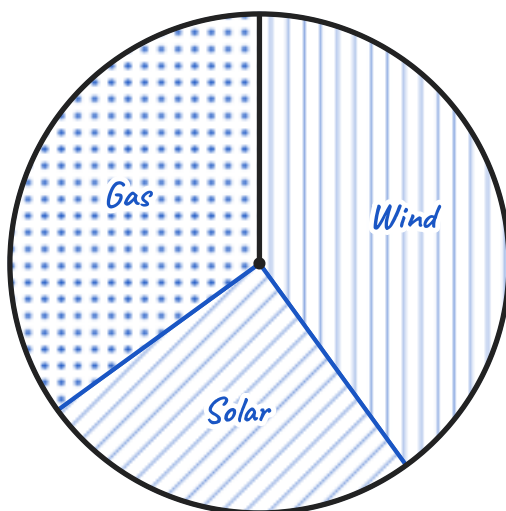


The table shows where a town's electricity comes from.

Draw a pie chart.

	Percentage	Angle
Wind	40%	144°
Solar	25%	90°
Gas	35%	126°
Total	100%	360°

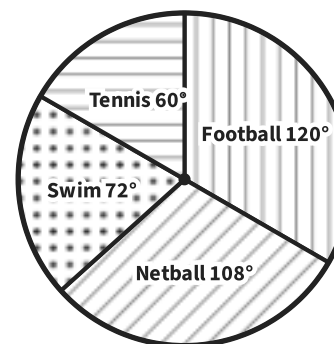
$$10\% \text{ of } 360^\circ = 36^\circ$$



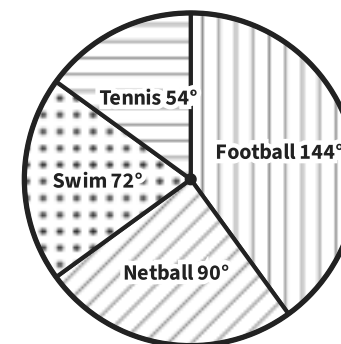
16



Tom says more students in class B chose football than in class A, because the football sector is bigger. Is Tom right? Explain.



Class A: 30 students



Class B: 20 students

Answer

No: A has 120° of 30 = 10, B has 144° of 20 = 8