

# Varied Fluency

## Step 7: Draw Pie Charts

### National Curriculum Objectives:

Mathematics Year 6: (6S1) [Interpret and construct pie charts and line graphs and use these to solve problems](#)

### Differentiation:

**Developing** Questions to support converting data into and drawing pie charts using up to 4 sets of data which will total 36 or 360.

**Expected** Questions to support converting data into and drawing pie charts with up to 6 sets of data which will total a number divisible by 6 or convert to a percentage which is a multiple of 10.

**Greater Depth** Questions to support converting data into and drawing pie charts with up to 6 sets of data which will total a number divisible by any factor of 360 or convert to a percentage which is a multiple of 5.

More [Year 6 Statistics](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

## Draw Pie Charts

1a. Fill in the missing information.

Hair colour of Year 6 children		
Colour	Number	Degrees
Brown	15	
Blonde	10	
Red	4	
Other		70°
Total	36	



VF

## Draw Pie Charts

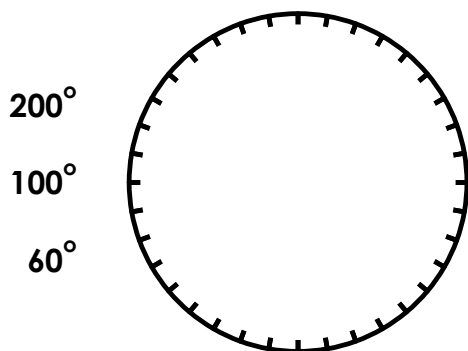
1b. Fill in the missing information.

Favourite colours of Whole School		
Colour	Number	Degrees
Blue		135°
Pink		45°
Red		105°
Orange		75°
Total	360	



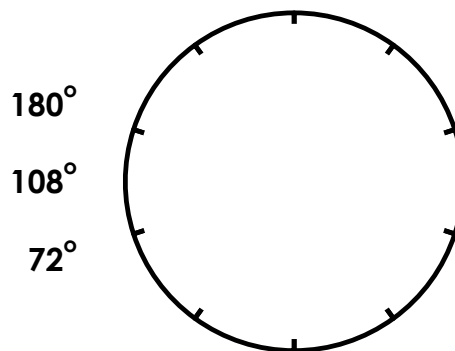
VF

2a. The circle below is split in to 36 equal parts each worth 10°. Construct a pie chart using the following degrees.



VF

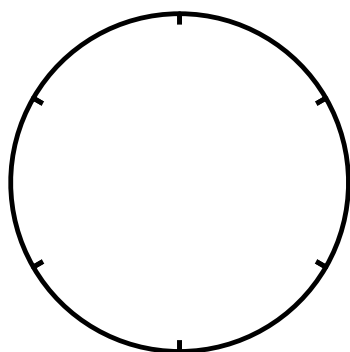
2b. The circle below is split in to 10 equal parts each worth 36°. Construct a pie chart using the following degrees.



VF

3a. Complete the table. Use the data in the table to construct a pie chart.

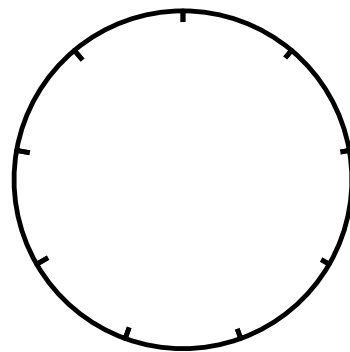
36 Children's Favourite Ice-cream		
Vanilla	Chocolate	Strawberry
6	18	12
o	o	o



VF

3b. Complete the table. Use the data in the table to construct a pie chart.

36 Children's Favourite Sport		
Tennis	Netball	Football
8	12	16
o	o	o



VF

## Draw Pie Charts

4a. Fill in the missing information.

Favourite crisps of Year 6 children		
Flavour	Number	Degrees
Salt and Vinegar	26	
Cheese and Onion	18	
Prawn Cocktail	15	
Ready Salted	7	
Beef and Onion		$30^\circ$
<b>Total</b>	<b>72</b>	



VF

## Draw Pie Charts

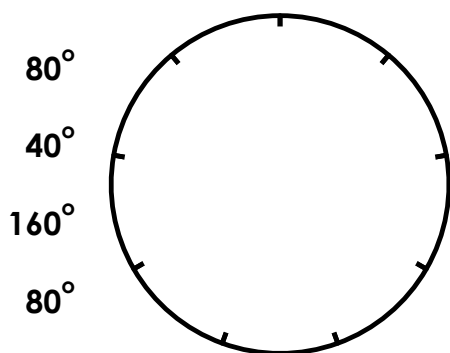
4b. Fill in the missing information.

Favourite animal of Year 5 children		
Animal	Percentage	Degrees
Polar Bear	20%	
Giraffe		
Monkey	10%	$36^\circ$
Elephant	20%	
Tiger		$108^\circ$
<b>Total</b>		



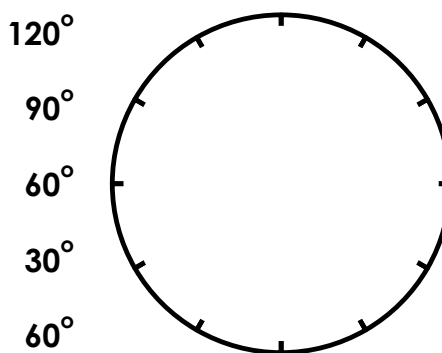
VF

5a. The circle below is split in to 9 equal parts. Construct a pie chart using the following degrees.



VF

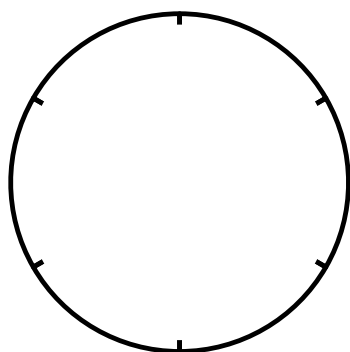
5b. The circle below is split in to 12 equal parts. Construct a pie chart using the following degrees.



VF

6a. Complete the table. Use the data in the table to construct a pie chart.

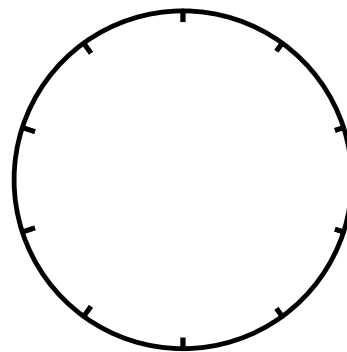
60 Children's Favourite Drinks			
Milk	Orange	Water	Coke
	20	10	
$60^\circ$	$^\circ$	$^\circ$	$120^\circ$



VF

6b. Complete the table. Use the data in the table to construct a pie chart.

72 Children's Favourite Pets				
Dog	Cat	Rabbit	Snake	Hamster
	18			
$160^\circ$	$^\circ$	$^\circ$	$20^\circ$	$40^\circ$



VF

## Draw Pie Charts

7a. Fill in the missing information.

Favourite dog breeds of Year 6		
Breed	Number	Degrees
Golden Retriever	18	72°
Border Collie	25	
Rottweiler		16°
Huskie		44°
Jack Russel	9	
Spaniel		
Total		



VF

## Draw Pie Charts

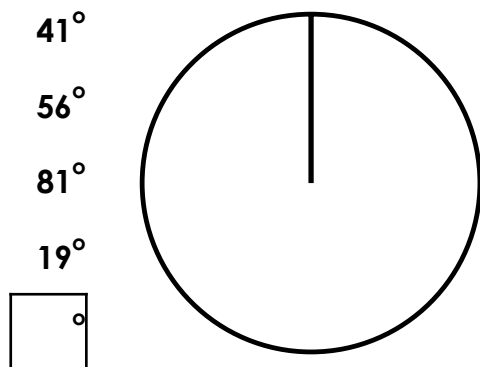
7b. Fill in the missing information.

Places visited by Year 6		
Place	%	Degrees
Spain	35%	
France		
Greece	10%	36°
Portugal	5%	
America		36°
Australia		54°
Total		



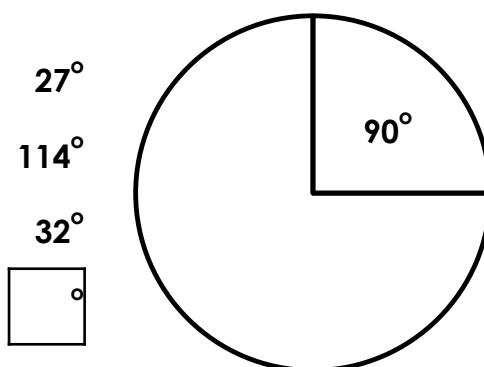
VF

8a. Use a protractor to construct a pie chart using the following degrees.



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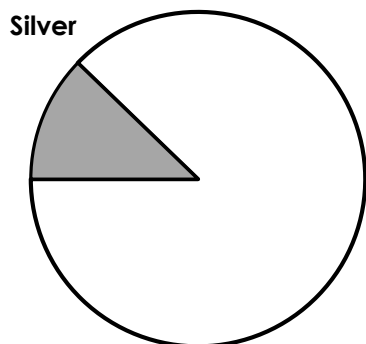
8b. Use a protractor to construct a pie chart using the following degrees.



VF

9a. Complete the table. Use the data in the table to construct a pie chart.

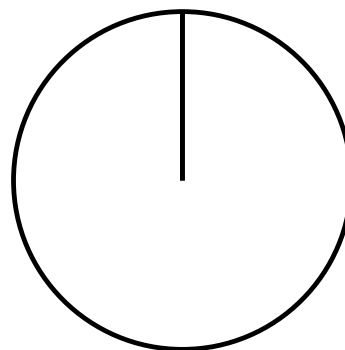
Colour of Cars in a School Car Park					
Red	Blue	Black	Silver	Green	White
28	21		11	6	
°	°	°	44°	°	20°



VF

9b. Complete the table. Use the data in the table to construct a pie chart.

Number of People Arriving at the Zoo at Different Times of the Day					
10am	11am	12pm	1pm	2pm	3pm
67		34	22	11	7
°	°	°	°	°	14°



VF

# Varied Fluency Drawing Pie Charts

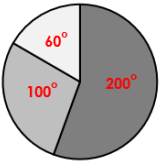
# Varied Fluency Drawing Pie Charts

## Developing

1a.

Hair colour of Year 6 children		
Colour	Number	Degrees
Brown	15	150°
Blonde	10	100°
Red	4	40°
Other	7	70°
<b>Total</b>	<b>36</b>	<b>360°</b>

2a.



3a.

36 children's Favourite Ice-cream				
Vanilla	Chocolate		Strawberry	
6	6	6	6	6
60°	180°		120°	

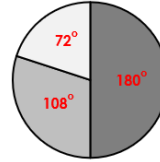


## Developing

1b.

Favourite colours of Whole School		
Colour	Number	Degrees
Blue	135	135°
Pink	45	45°
Red	105	105°
Orange	75	75°
<b>Total</b>	<b>360</b>	<b>360°</b>

2b.



3b.

36 children's Favourite Sport								
Tennis		Netball			Football			
4	4	4	4	4	4	4	4	4
80°		120°			160°			

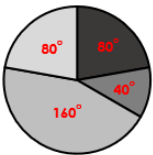


## Expected

4a.

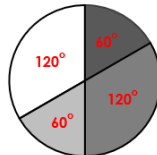
Favourite crisps of Year 6 children		
Flavour	Number	Degrees
Salt and Vinegar	26	130°
Cheese and Onion	18	90°
Prawn Cocktail	15	75°
Ready Salted	7	35°
Beef and Onion	6	30°
<b>Total</b>	<b>72</b>	<b>360°</b>

5a.



6a.

60 Children's Favourite Drinks			
Milk	Orange	Water	Coke
10	20	10	20
60°	120°	60°	120°

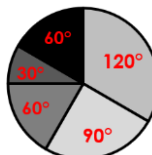


## Expected

4b.

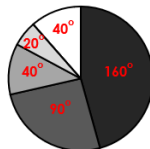
Favourite animal of Year 5 children		
Animal	Percentage	Degrees
Polar Bear	20%	72°
Giraffe	20%	72°
Monkey	10%	36°
Elephant	20%	72°
Tiger	30%	108°
<b>Total</b>	<b>100%</b>	<b>360°</b>

5b.



6b.

72 Children's Favourite Pets				
Dog	Cat	Rabbit	Snake	Hamster
32	18	10	4	8
160°	90°	50°	20°	40°



# Varied Fluency Drawing Pie Charts

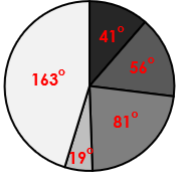
# Varied Fluency Drawing Pie Charts

## Greater Depth

7a.

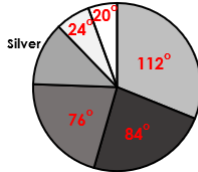
Favourite dog breeds of Year 6		
Breed	Number	Degrees
Golden Retriever	18	72°
Border Collie	25	100°
Rottweiler	4	16°
Huskie	11	44°
Jack Russel	9	36°
Spaniel	23	92°
<b>Total</b>	<b>90</b>	<b>360°</b>

8a.



9a.

Colour of cars in a school car park					
Red	Blue	Black	Silver	Green	White
28	21	19	11	6	5
112°	84°	76°	44°	24°	20°

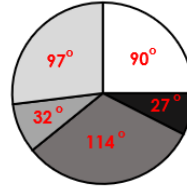


## Greater Depth

7b.

Places visited by Year 6		
Place	%	Degrees
Spain	35%	126°
France	25%	90°
Greece	10%	36°
Portugal	5%	18°
America	10%	36°
Australia	15%	54°
<b>Total</b>	<b>100%</b>	<b>360°</b>

8b.



9b.

Number of people arriving at the zoo at different times of the day						
10am	11am	12pm	1pm	2pm	3pm	
67	39	34	22	11	7	
134°	78°	68°	44°	22°	14°	

