

1. Tuki did work experience at a vets.

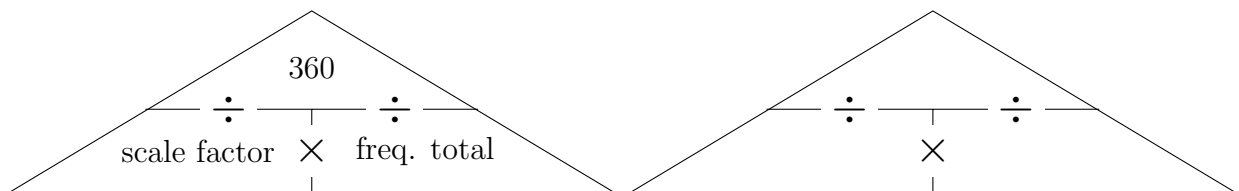
She did a survey of the pets she saw in the waiting room one day.

Here are her results.

Pet	Frequency	angle	bearing
Cat	7		← 000°
Dog	9		← .....°
Other	4		← .....°
total →		× → 360°	← 360°

Draw an accurate pie chart to show the information in the table.

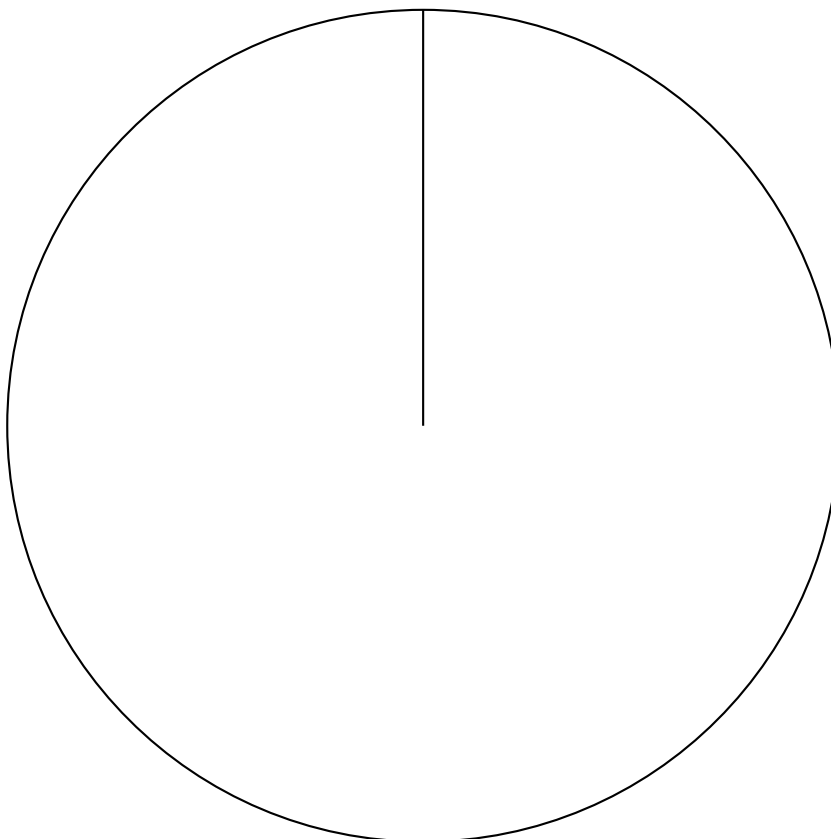
(i) Work out the scale factor. {Use the empty proportional triangle if it helps you.}



(ii) Calculate the angles.

(iii) Calculate the bearings and draw the sectors. {Bearings help with accuracy}

(iv) Label the sectors.

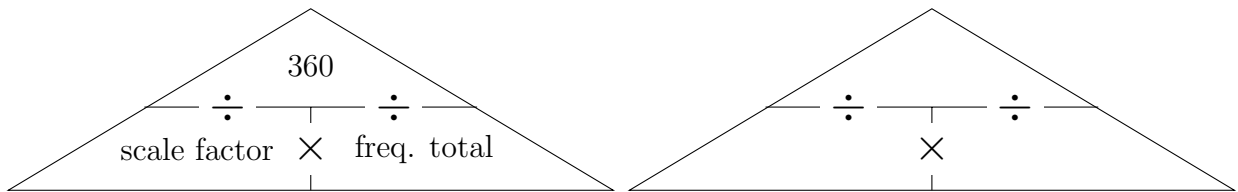


2. 72 people at a climate change demonstration requested government to help with one change. Here are their choices.

Change	frequency	angle	bearing
Diet	11		← 000°
Family Size	28		← .....°
Travel	27		← .....°
Work	6		← .....°
total →		× → 360°	← 360°

Draw an accurate pie chart to show the information in the table.

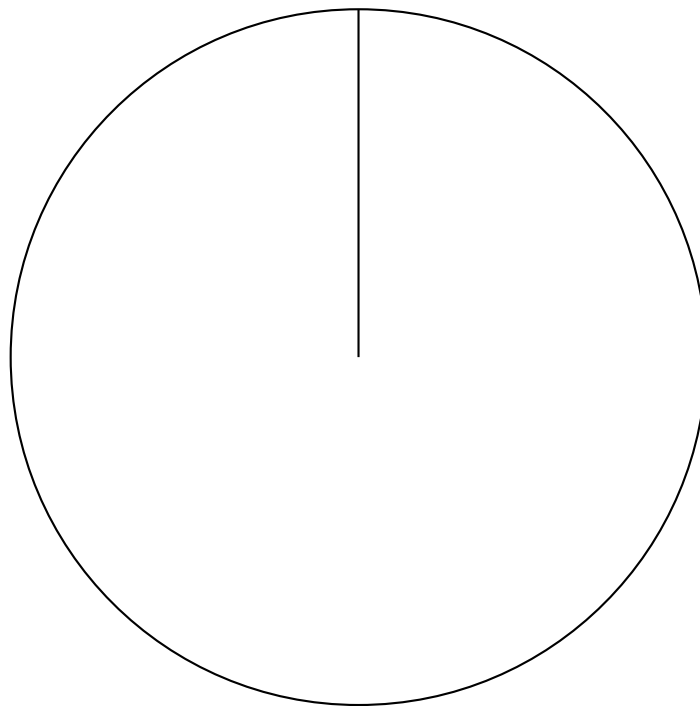
(i) Work out the scale factor. {Use the empty proportional triangle if it helps you.}



(ii) Calculate the angles.

(iii) Calculate the bearings and draw the sectors. {Bearings help with accuracy}

(iv) Label the sectors.



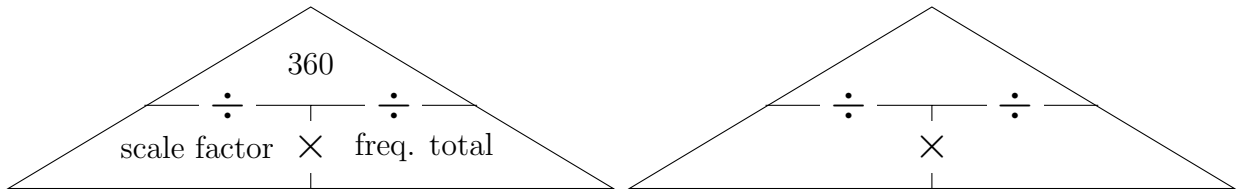
3. A teacher asked 40 students to choose a more healthy snack.

Here are his results.

snack	frequency	angle	bearing
apple	13		← 000°
banana	19		← .....°
toast	8		← .....°
total →		× → 360°	← 360°

Draw an accurate pie chart to show his results.

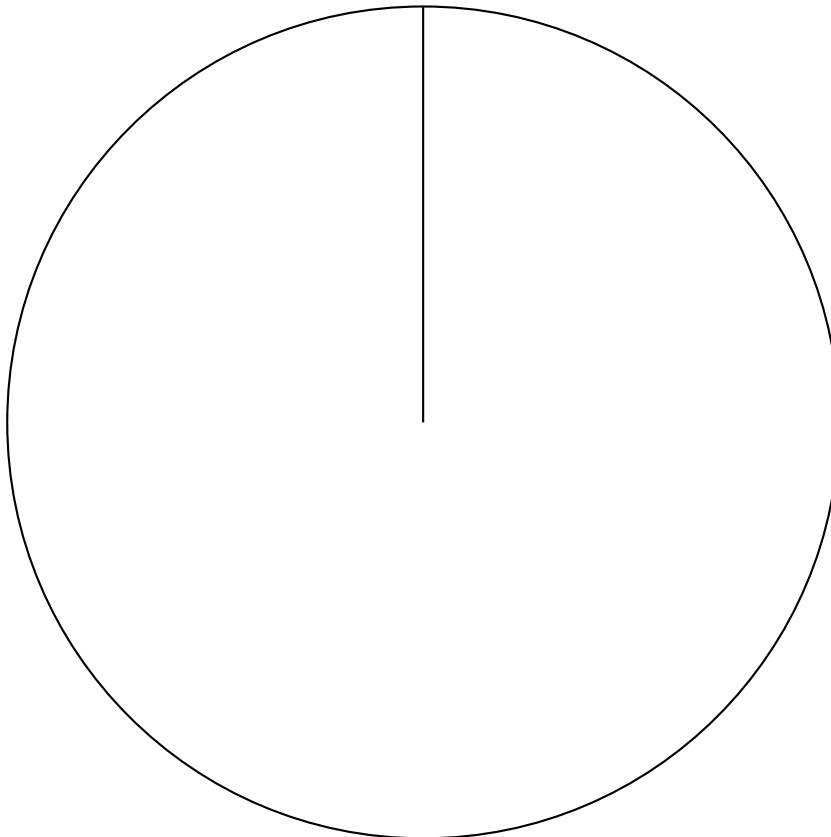
(i) Work out the scale factor. {Use the empty proportional triangle if it helps you.}



(ii) Calculate the angles.

(iii) Calculate the bearings and draw the sectors. {Bearings help with accuracy}

(iv) Label the sectors.



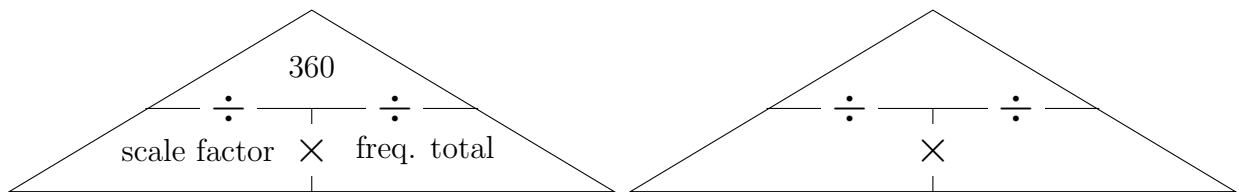
4. A researcher asked some students to name their favourite lesson.

Here are his classifications their choices.

	Creative Arts	Sport	STEM	Written word	Total
Frequency	73	15	7	25	
Angle					
Bearing	$000^\circ$	..... $^\circ$	..... $^\circ$	..... $^\circ$	$360^\circ$

Draw an accurate pie chart to show his results.

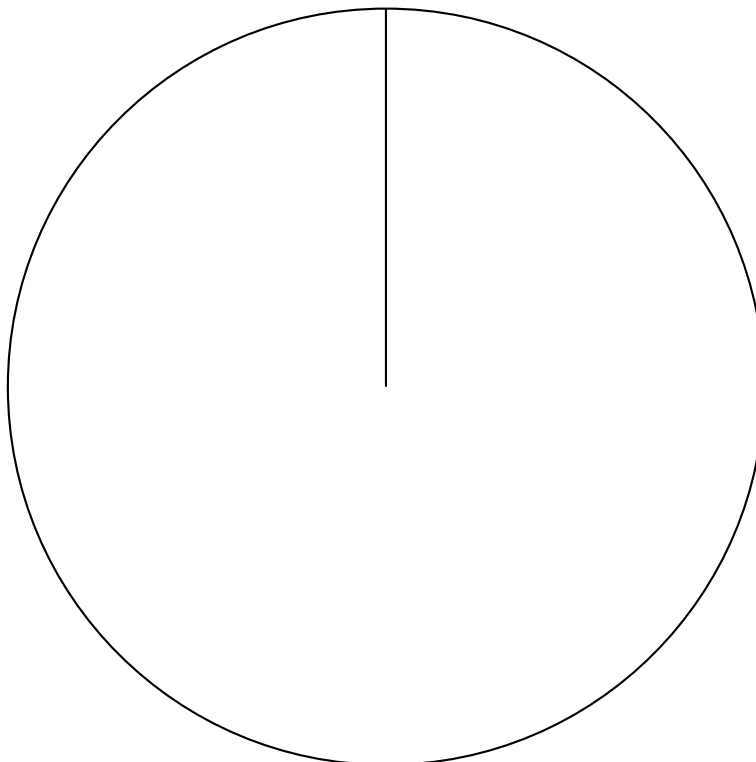
(i) Work out the scale factor. {Use the empty proportional triangle if it helps you.}



(ii) Calculate the angles.

(iii) Calculate the bearings and draw the sectors. {Bearings help with accuracy}

(iv) Label the sectors.



## Answers

## 1. Pets at a vet

(i) 18  
(ii) angles: 126, 162, 72  
(iii) bearings: 126, 288

**FYI:** (i) B1, (ii) B1 (iii) sectors  $\pm 2^\circ$  and (iv) labels (B1)

## 2. Climate change

(i) 5  
(ii) angles: 55, 140, 135, 30  
(iii) bearings: 055, 195, 330

**FYI:** (i) B1, (ii) B1 (iii) sectors  $\pm 2^\circ$  and (iv) labels (B1)

## 3. Snack

(i) 9  
(ii) angles: 117, 171, 72  
(iii) bearings: 117, 288

**FYI:** (i) B1, (ii) B1 (iii) sectors  $\pm 2^\circ$  and (iv) labels (B1)

## 4. Lesson type

(i) 3  
(ii) angles: 219, 45, 21, 75  
(iii) bearings: 219, 264, 285

**FYI:** (i) B1, (ii) B1 (iii) sectors  $\pm 2^\circ$  and (iv) labels (B1)