

Quantitative Methods

Pie Charts

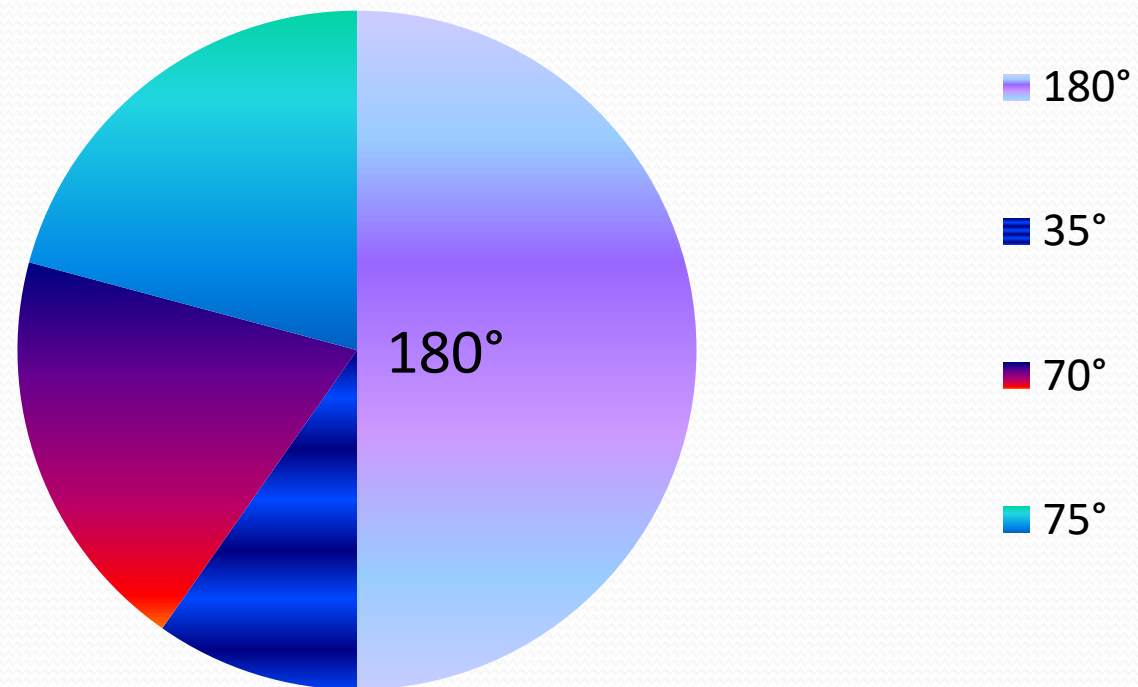
Module No. Cons 1012
Lecturer Jennifer Byrne

Pie Chart

- A Pie Chart is a circular diagram which shows how a quantity is divided.
- The Pie represents the whole circle.
- Each quantity is shown as a sector.
- 180° is half of 360° so this angle would represent half of the total quantity or 50%
- Formula:
- Angle = $\frac{\text{Quantity to be represented}}{\text{Total Quantity}} \times 360^\circ$

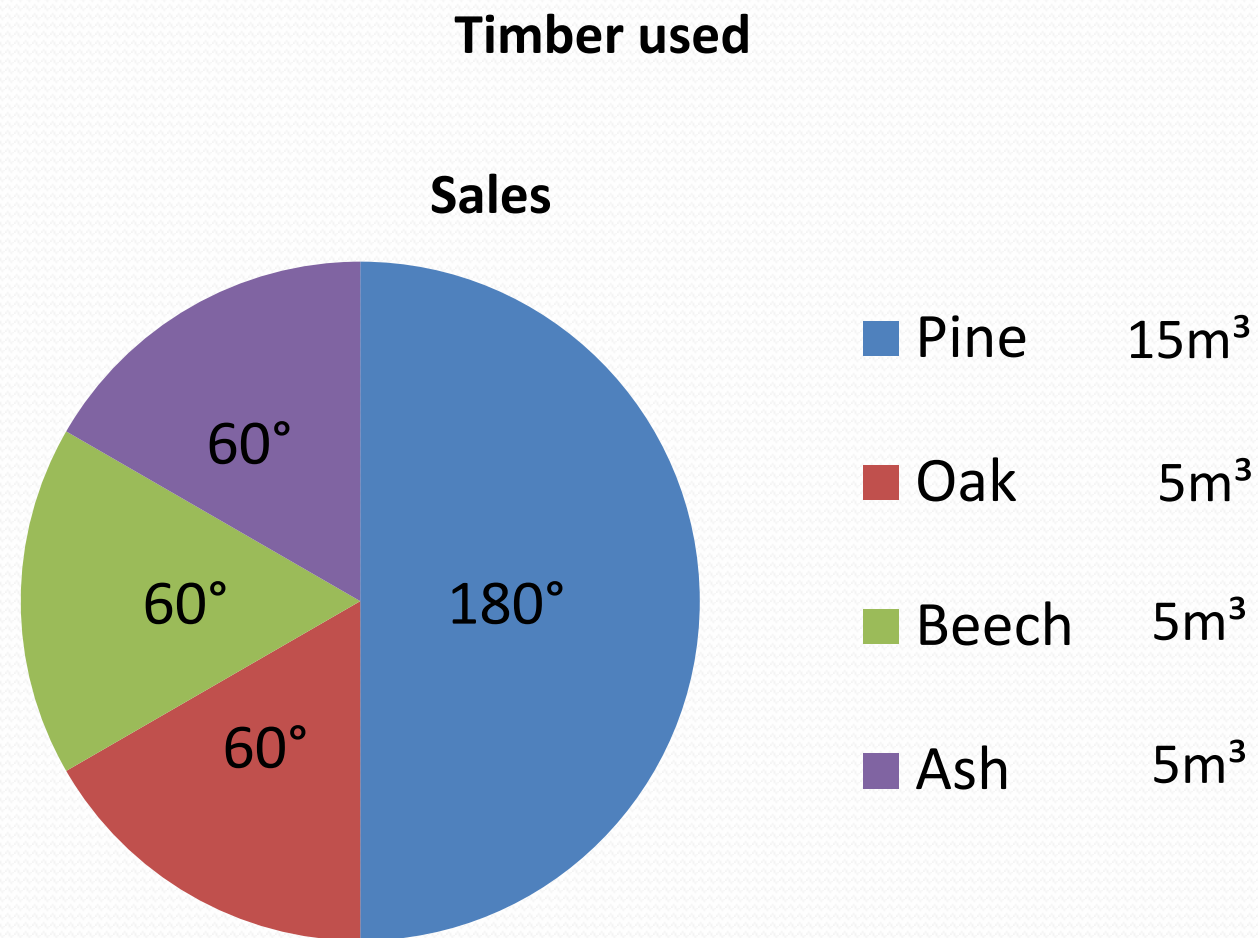
Total Quantity

Sales



Pie Chart

Example 1. Each section of the Pie Chart represents the amount of timber used in a workshop in one year

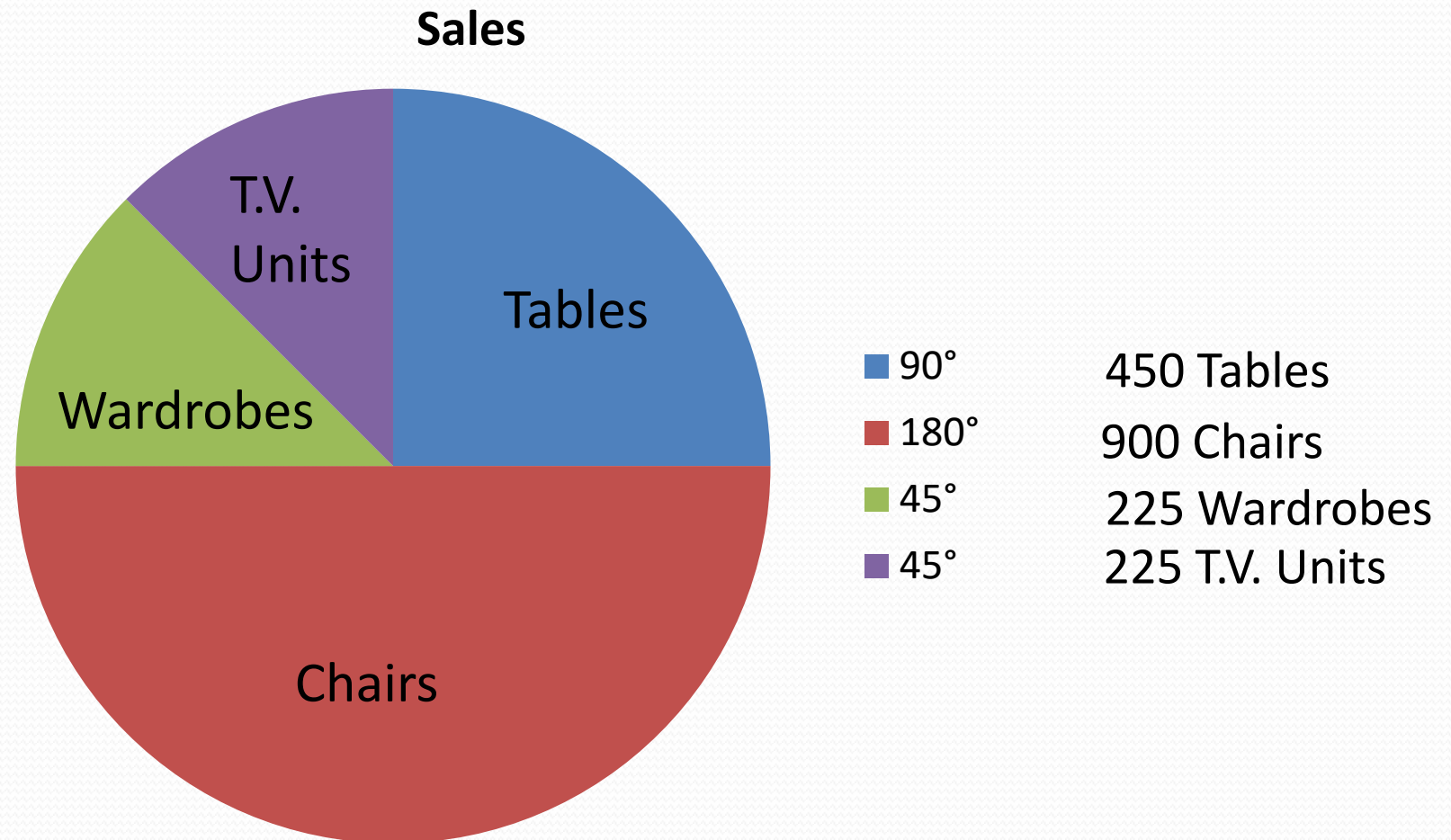


Q 1. If 30m³ of timber is used in one year how much of each type is used

Pie Chart

Q2. Pie chart below shows the different types of furniture made by a factory out of a total 1800 items.

Calculate the exact quantity of each type.



$$1800 \div 360^\circ = 5 \quad \text{one degree equals 5}$$

$$180^\circ \times 5 = 900 \text{ Chairs}$$

Or 180° is equal to half of a circle therefore

$$1800 \div 2 = 900$$

Q 3 The following table shows the results that students received in a drawing exam. Draw a pie chart to represent this information.

Grade	No. Of Students	Degrees
A	4	48°
B	7	84°
C	10	120°
D	6	72°
E	2	24°
F	1	12°
	30	360°

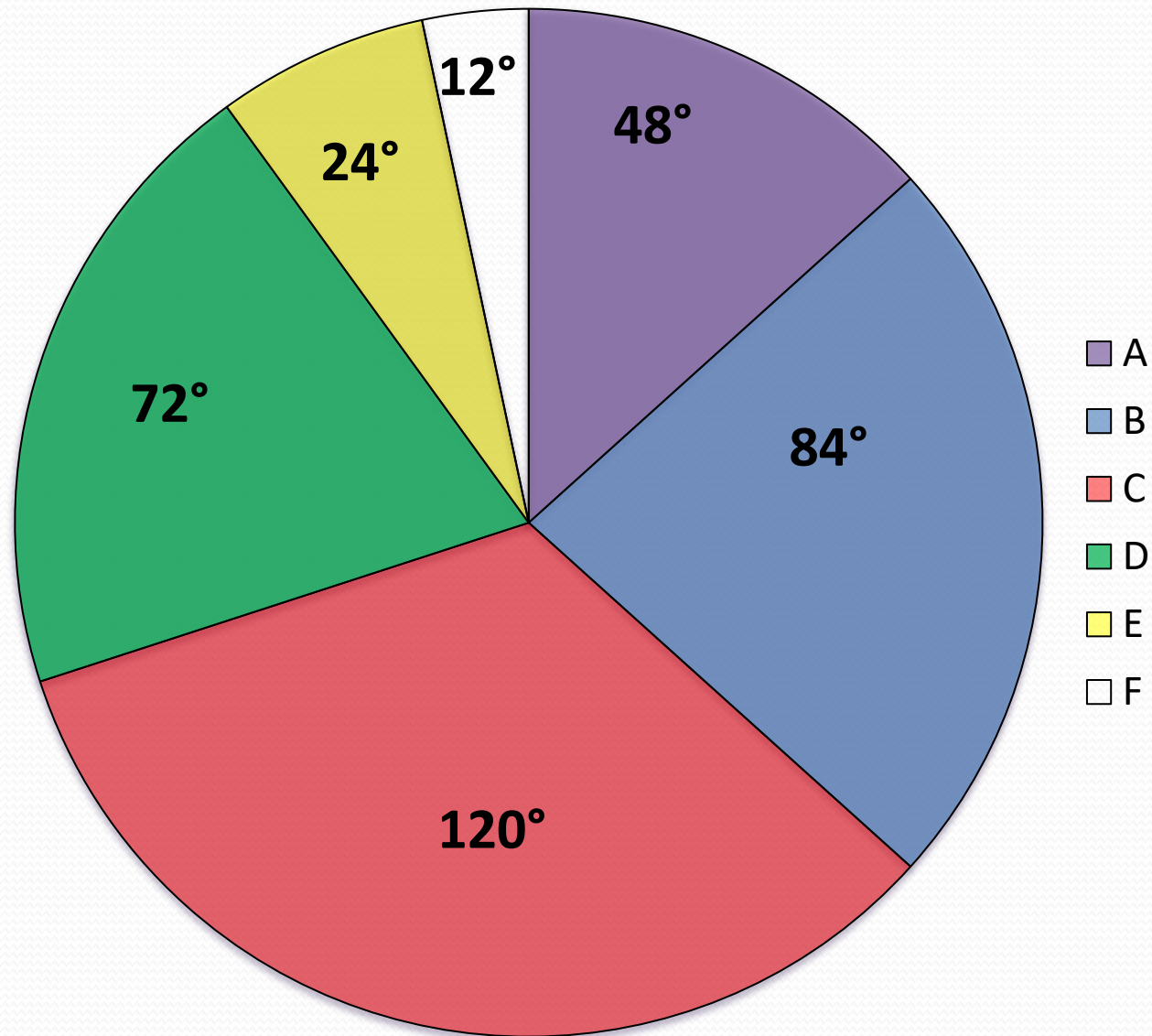
No of Students 30

Using formula $4/30 \times 360^\circ = 48^\circ$

Or

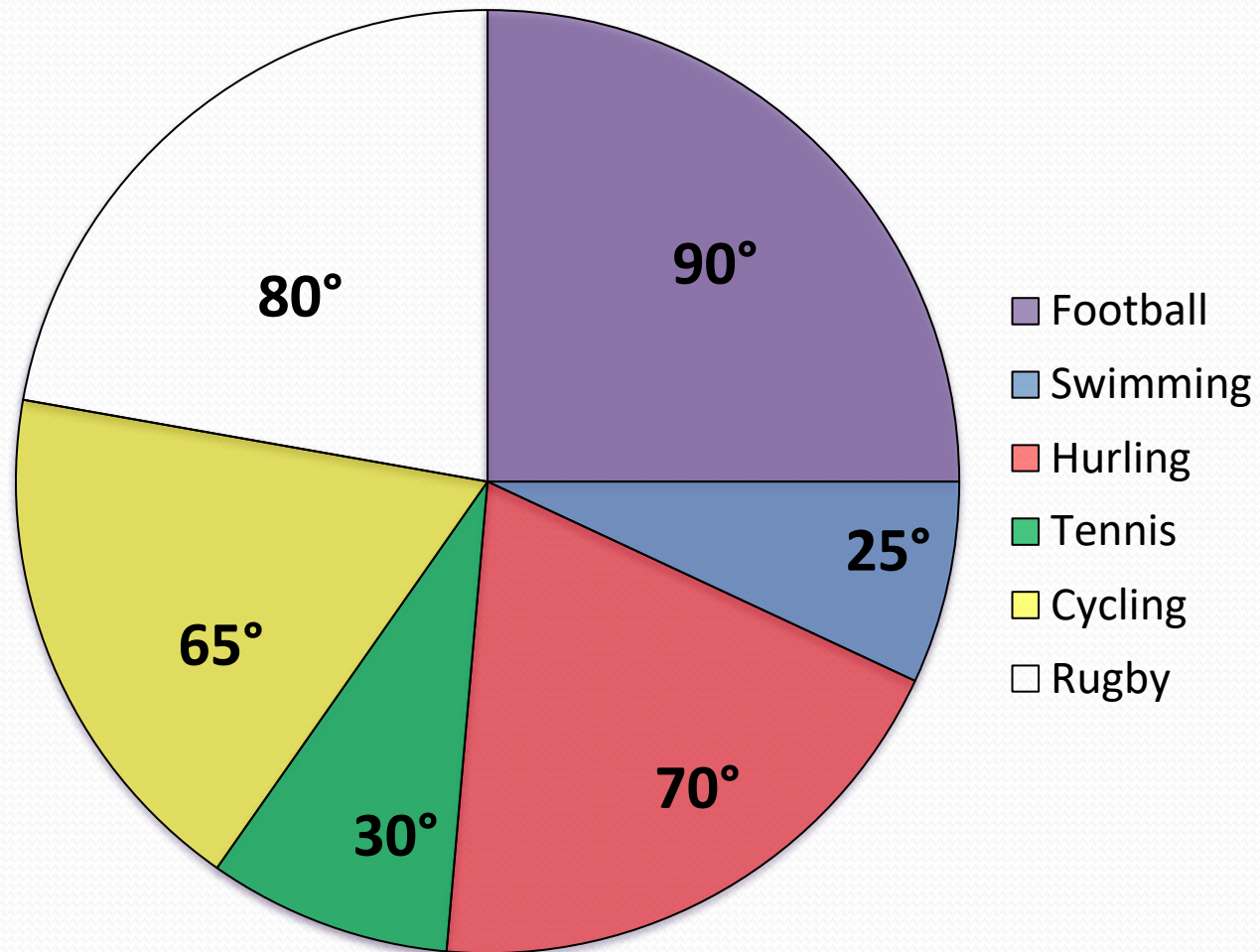
$360^\circ \div 30 = 12$ $12 \times 4 = 48^\circ$

Ans 3. Results from Drawing Test represented in a Pie Chart.



Pie Chart

Q 4. From the Pie Chart find out how many out of 180 students play each sport.



Ans. 4. The following table shows how many out of 180 students play each sport.

Grade	No. Of Students	Degrees
Football	45	90°
Swimming	12 12.5	25°
Hurling	35	70°
Tennis	15	30°
Cycling	33 32.5	65°
Rugby	40	80°
	180	360°

No of Students 180

Using formula $90 = (x/180) \times 360^\circ$

$$90 \times 180 = (x) \times 360 = 16200 / 360 = 45$$

Or

$$180 \div 360^\circ = 0.5 \quad 0.5 \times 90 = 45 \text{ students}$$

Q 1 The following table shows the results that students received in a drawing exam.
Draw a pie chart to represent this information

Grade	No. Of Students	Degrees
A	4	
B	7	
C	10	
D	6	
E	2	
F	1	

Q 2 From Pie Chart find out how many out of 180 students play each sport.

