



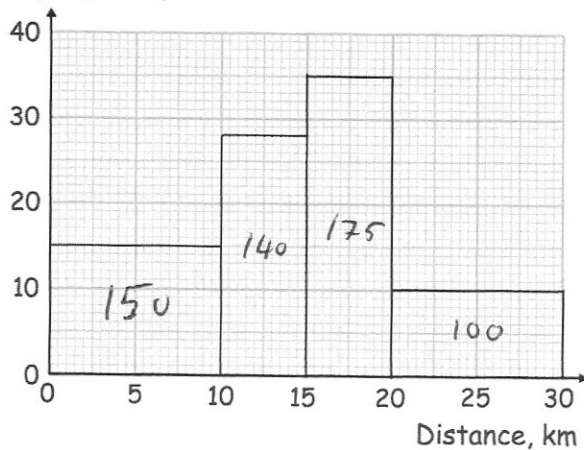
Harry has rounded a number to 10 to one significant figure.

Write down the upper bound and lower bound.

$$LB = 9.5$$

$$UB = 15$$

Frequency Density



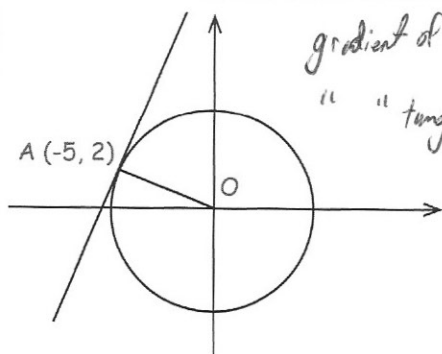
Hannah surveyed students on how far they travel to college.  
150 students travelled less than 10km.

How many students did Hannah survey?

$$565$$

Calculate an estimate of the mean distance travelled

Distance	frequency	$fx$	
0-10	150	750	$8062.5 \div 565 = 14.27 \text{ km}$
10-15	140	1750	
15-20	175	3062.5	
20-30	100	2500	
	<u>565</u>	<u>8062.5</u>	



gradient of  $OA = -\frac{2}{5}$

" " tangent =  $\frac{5}{2}$

The diagram shows the circle  $x^2 + y^2 = 29$  with a tangent at the point  $(-5, 2)$

$$0 = 2.5x + \frac{29}{2}$$

$$-14.5 = 2.5x$$

$$x = -5.8$$

$$(-5.8, 0)$$

$C(0, 14.5)$

Find the equation of the tangent

$$y = \frac{5}{2}x + c$$

$$2 = -\frac{25}{2} + c$$

$$c = 14.5$$

$$y = \frac{5}{2}x + \frac{29}{2}$$

The tangent crosses the x-axis at the point B and the y-axis at the point C

Find the length BC

$$\sqrt{5.8^2 + 14.5^2}$$

$$= 15.617$$