

Qu	Scheme	Marks	AOs
1(a)	As (male) elephant shoulder <u>height</u> increases the tusk <u>length</u> increases.	B1	2.4
		(1)	
(b)	Every additional cm of shoulder height gives an additional 0.8[43] cm of tusk length. (o.e.)	B1	3.4
		(1)	
(c)	e.g. he has only used data for male elephants so using this to comment on relationship for all elephants (including female) is not appropriate	B1	2.4
		(1)	
(d)	For finding the area between 75cm and 100cm e.g. each row = 0.1 giving $5 \times 1.6 + 10 \times 1.2 + 10 \times 0.8$ <u>or</u> rectangles $8 + 12 + 8 (= 28)$	M1	3.1a
	For finding the total area of the histogram e.g. $20 \times 0.8 + 10 \times 1.7 + 10 \times 1.2 + 10 \times 1.6 + 10 \times 1.2 + 20 \times 0.8 + 20 \times 0.2$ <u>or</u> rectangles $16 + 17 + 12 + 16 + 12 + 16 + 4 (= 93)$ and Percentage between 75cm and 100cm e.g. $\frac{"28"}{"93"} \times 100$	M1	1.1b
	30.1...(%)	A1	1.1b
		(3)	

(6 marks)

Notes:

(a) **B1:** For a correct interpretation of positive correlation, must mention “height” and “length” not just *s* and *t*

(b) **B1:** For a correct interpretation of the gradient of the regression line. Must make reference to rate. Must see value to at least 1 sf

(c) **B1:** A suitable reason e.g. Matthew only used the data for male (or African) elephants

(d) **M1:** For use of the relative heights of the three columns to find a value for area of the histogram between 75cm and 100cm. Ratio of their 1.6, their 1.2 to their 0.8 must be correct i.e. 4:3:2.

M1: For realising the need to find a total area **and** find a percentage. Heights used for the bars must be consistent with those used for the first M mark. If working shown can allow maximum of 2 errors in either the heights or widths in the calculation of the total.
An omission is 2 errors.

A1: awrt 30.1(%), allow awrt 30(%) provided full working shown and no errors.

Note: M1M1 may be awarded for $\frac{28}{93} \times 100$ oe, but $\frac{28}{93}$ alone with no attempt to obtain a percentage

is M1M0