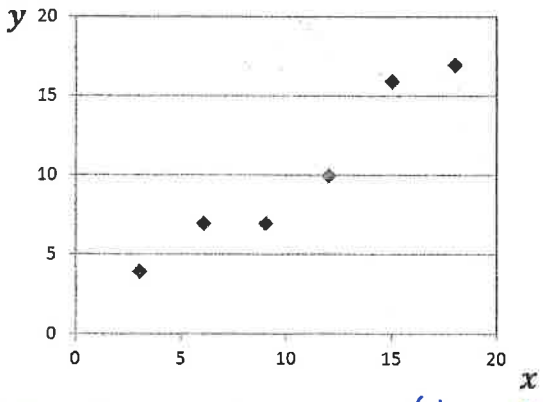
Warm Up

(1) The weights of suitcases at an airport are normally distributed with a mean of 17 kg and $\sigma = 3$ kg

a) How many of the 300 suitcases per hour would you expect to be lighter than 15 kg?

b) 4% of the suitcases on any day are rejected because they exceed the weight limit. What is the weight limit?

(2) Consider the graph of variables x versus y shown on the set of axes below:



a. Draw a line of best fit on the graph shown above. (doesn't count if not done with a ruler.)

b. Circle the correlation coefficient shown below that best illustrates the relationship shown between the two sets of data x and y.

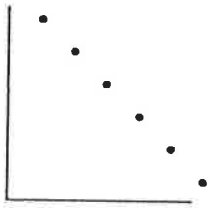
$r \approx 0$ $\quad r \approx -0.96$ $\quad r \approx 0.96$ $\quad r \approx 0.24$

c. Use the line of best fit drawn in part (a) above to estimate a value of y corresponding to an x value of 10.

3

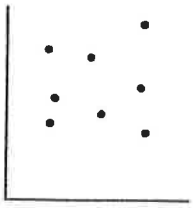
Match the letter of the appropriate correlation coefficient with the graphs shown below:

Graph 1:



r =

Graph 2:



r =

Graph 3:

r =

A. $r \approx 0$ B. $r \approx +1.0$ C. $r \approx -1.0$ D. $r \approx +0.7$ E. $r \approx -0.7$

4

Ten middle years students were measured for height (h) and arm span (a). The results are shown in the table below:

Height: h (cm)	Arm Span: a (cm)
152	154
156	154
160	158
164	166
166	163
166	167
170	172
175	174
177	178
180	178

a. Calculate $\bar{h}$ and $\bar{a}$. ($\bar{h}$ = mean height and $\bar{a}$ = mean arm span)

b. Determine the correlation coefficient between h and a.

c. Use words to describe the correlation between h and a