DO NOW – Match the correct r value with the graph

1.   r = -0.923   r = -0.487   r = 0.006   r = 0.777

(a)   (b)   (c)   (d)
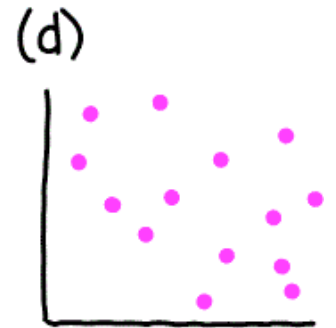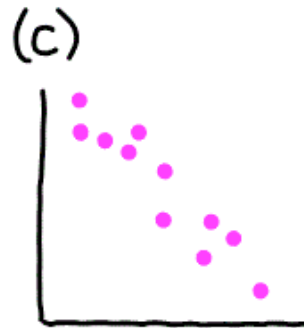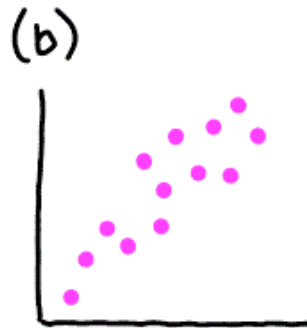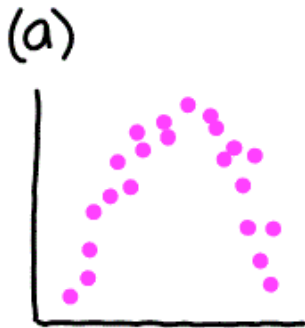
2.   r = -0.977   r = -0.021   r = 0.736   r = 0.951

(a)   (b)   (c)   (d)

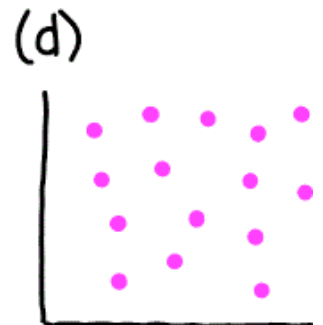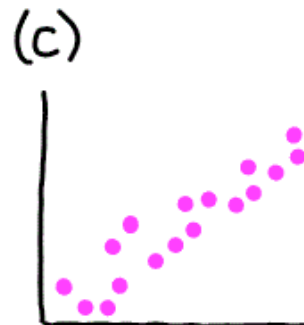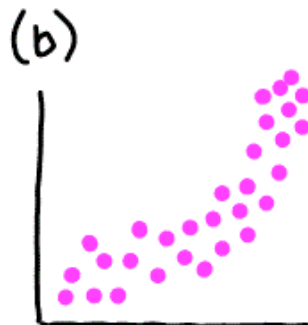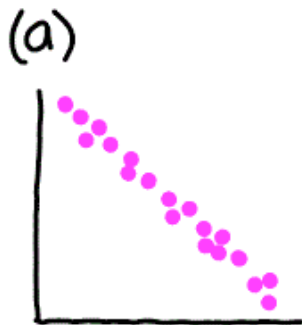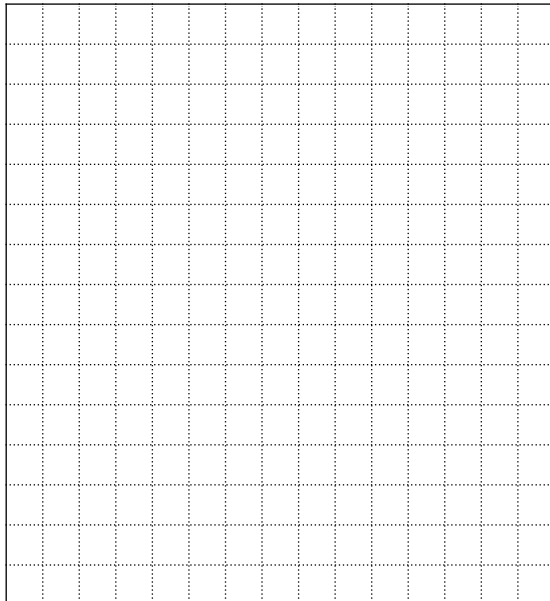1.)   **# of Hours Studying and Test Scores** The number of hours of 13 students spent studying for a test and their scores on that test are shown in the table below. Graph the data on the grid below and find the correlation. Then, make a conclusion about the correlation.

Hours spent studying	0	1	2	4	4	5	5	5	6	6	7	7	8
Test Score	40	41	51	48	64	69	73	75	68	93	84	90	95

x_i	$\dfrac{(x_i - \overline{x})}{s_x}$	y_i	$\dfrac{(y_i - \overline{y})}{s_y}$
0		40	
1		41	
2		51	
4		48	
4		64	
5		69	
5		73	
5		75	
6		68	
6		93	
7		84	
7		90	
8		95	

Use the space below to find r: **(You may use your calculator, but you must write out the steps)**

Based on the value of r, describe the overall pattern of the scatterplot (form, direction, and strength)

2.)   **TV and Test Scores**   An instructor wants to show students that there is a linear relationship between the number of hours they watch television during a certain weekend and their scores on a test taken the following Monday. The table below shows the # of hours spent watching and that student's score on the test. Graph the data on the grid below and find the correlation. Then, make a conclusion about the correlation.

Hours spent watching TV	0	1	2	3	3	5	5	5	6	7	7	10
Test Score	96	85	82	74	95	68	76	85	58	65	75	50
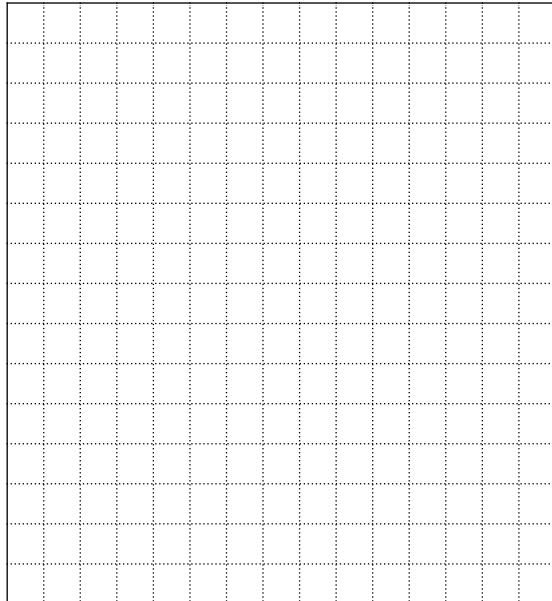
You don't have to fill in the chart

x_i	$\dfrac{\left(x_i - \bar{x}\right)}{s_x}$	y_i	$\dfrac{\left(y_i - \bar{y}\right)}{s_y}$
0		96	
1		85	
2		82	
3		74	
3		95	
5		68	
5		76	
5		85	
6		58	
7		65	
7		75	
10		50	

Use the space below to find r:

(You may use your calculator, but you must write out the steps)

<u>Based on the value of r</u>, describe the overall pattern of the scatterplot (form, direction, and strength)

3.)   **Coffee Sales and Temperature** The high outdoor temperature (in degrees Fahrenheit) and coffee sales (in hundreds of dollars) for a coffee shop for eight randomly selected days is shown in the table below. Graph the data on the grid below and find the correlation. Then, make a conclusion about the correlation.

Temperature	32	39	51	60	65	72	78	81
Coffee Sales	26.2	24.8	19.7	20.0	13.5	13.9	11.4	11.2
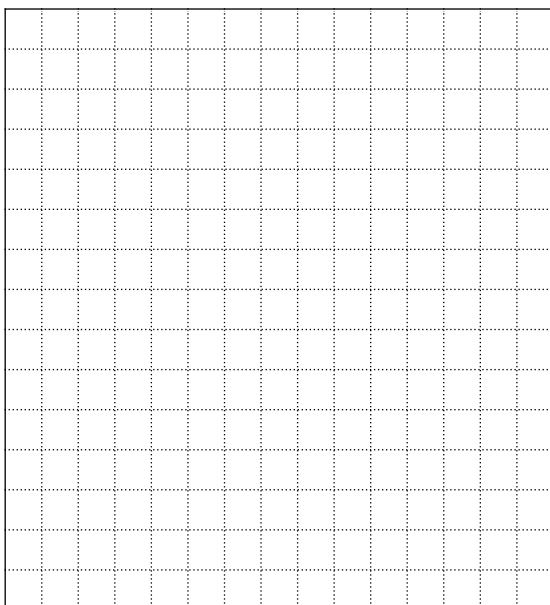
You don't have to fill in the chart

x_i	$\dfrac{\left(x_i - \bar{x}\right)}{s_x}$	y_i	$\dfrac{\left(y_i - \bar{y}\right)}{s_y}$
32		26.2	
39		24.8	
51		19.7	
60		20.0	
65		13.5	
72		13.9	
78		11.4	
81		11.2	

Use the space below to find r: **(You may use your calculator, but you must write out the steps)**

Based on the value of r, describe the overall pattern of the scatterplot (form, direction, and strength)