KNEWTON | alta

Linear Regressions and Predictions

Learning Objectives

- Find the linear regression equation given a list of data points
- Make predictions using the line of best fit

Find the linear regression equation given a list of data points

1. Fourteen children ages 2 to 12 were measured for their height. The data gathered is shown in the table below.

Child	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Age	9	3	10	2	10	10	12	10	5	4	6	11	7	11
Height	40	28	44	24	43	53	44	44	32	32	34	48	40	43

Find the line of best fit for the data with technology. Round your answers to three decimal places.

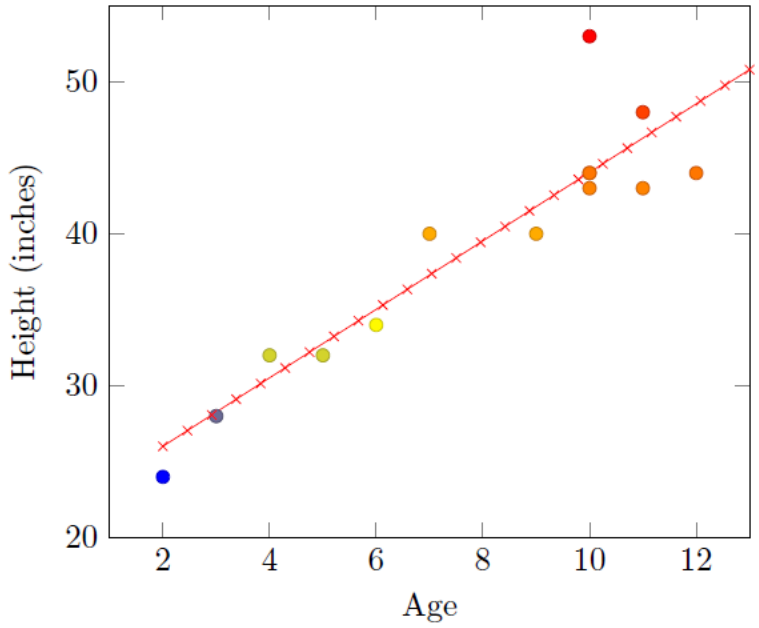
2. Create a graph of your data and the line of best fit on the same graph.

Make predictions using the line of best fit

3. Use the line of best fit that you obtained above to determine the expected height of an eight-year-old child. Round your answer to the nearest tenth of an inch.

ANSWER KEY

1. $y = 2.254x + 21.504$



2.

3. 39.5 inches