Name _____ Date _____ Class_____

Using Regression Models

The table below shows the total attendance at major league baseball games, at 10-year intervals since 1930. Use the table for the problems that follow.

Major League Baseball Total Attendance (y_d), in millions, vs. Years Since 1930 (x)									
x	0	10	20	30	40	50	60	70	80
y_d	10.1	9.8	17.5	19.9	28.7	43.0	54.8	72.6	73.1
y_m									

1. Use a graphing calculator to find the exponential regression equation for this data. Round a and b to the nearest thousandth.

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2. According to the regression equation, by what percent is attendance growing each year?

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3. Complete the row labeled y_m above. This row contains the predicted y-values for each x-value. Round your answers to the nearest tenth.

4. Use your graphing calculator to find the correlation coefficient for the equation and write it below. Does the correlation coefficient make it seem like the equation is a good fit for the data?

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5. Use the exponential regression equation to predict major league baseball attendance in 2020. Based on your earlier work on this page, do you think this is a reasonable prediction? Explain.

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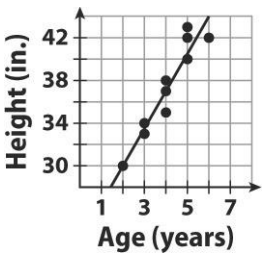
Use the scatter plot, fitted line, and residual plot for 1–5.



1. Find the equation of the line of fit shown above.

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2. Use the line of fit to predict the height of a 20-year old man. Discuss the suitability of the linear model for extrapolation in this case.

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