Worksheet

Linear Regression Olympic Gold Medal Swimming Times for 100m Freestyle

Year	Men Gold Medalist	Time
1912	D. Kahanamoku, USA	63.4
1920	D. Kahanamoku, USA	61.4
1924	J. Weissmuller, USA	59.0
1928	J. Weissmuller, USA	58.6
1932	Y. Miyazaki, Japan	58.2
1936	F. Csik, Hungary	57.6
1948	R. Ris, USA	57.3
1952	C. Scholes, USA	57.4
1956	J. Henricks, Austalia	55.4
1960	J. Devitt, Australia	55.2
1964	D. Schollander, USA	53.4
1968	M. Wenden, Australia	52.2
1972	M. Spitz, USA	51.22
1976	J. Montgomery, USA	49.99
1980	J. Woithe, E. Germany	50.40
1984	R. Gains, USA	49.80
1988	M. Biondi, USA	48.63
1992	A. Popov, Russia	49.02
1996	A. Popov, Russia	48.74
2000	P. vd Hoog., Ned	48.30
2004	P. vd Hoog., Ned	48.17
2008	A. Bernard, Fra	47.21
2012	N. Adrian, USA	47.52

Year	Women Gold Medalist	Time
1912	F. Durack, Australia	82.2
1920	E. Bleibtry, USA	73.6
1924	E. Lackie, USA	72.4
1928	A. Osipowich, USA	71.0
1932	H. Madison, USA	66.8
1936	H. Mastenbroek, Holland	65.9
1948	G. Andersen, Denmark	66.3
1952	K. Szoke, Hungary	66.8
1956	D. Fraser, Australia	62.0
1960	D. Fraser, Australia	61.2
1964	D. Fraser, Australia	59.5
1968	J. Henne, USA	60.0
1972	S. Nielson,USA	58.59
1976	K. Ender, E. Germany	55.65
1980	B. Krause, E. Germany	54.79
1984	C. Steinseife, USA (tie)	55.92
1984	N. Hogshead, USA (tie)	55.92
1988	K. Otta, E. Germany	54.93
1992	Z. Young, China	54.64
1996	L. Jingyi, China	54.50
2000	I. de Bruijn, Netherlands	53.83
2004	J. Henry, Australia	53.84
2008	B. Steffen, Gemany	53.12
2012	R. Kromowidjojo, Netherlands	53.00

1. Make a scatter plot for each set of data (plot the graph set).
2. Find the equation of the line that best fits the given data.
3. Graph the regression line (plot the line of best fit).
4. Does your linear equation predict the following times swam at the 2016 Rio Olympic games. Men (47.58) & Women (52.70)
5. Based on your linear model, during which year will the women be swimming faster than the men?