

# WORKʃHEET

## Linear Regression Olympic Gold Medal Swimming Times for 100m Freestyle

Year	Men Gold Medalist	Time	Year	Women Gold Medalist	Time
1912	D. Kahanamoku, USA	63.4	1912	F. Durack, Australia	82.2
1920	D. Kahanamoku, USA	61.4	1920	E. Bleibtry, USA	73.6
1924	J. Weissmuller, USA	59.0	1924	E. Lackie, USA	72.4
1928	J. Weissmuller, USA	58.6	1928	A. Osipowich, USA	71.0
1932	Y. Miyazaki, Japan	58.2	1932	H. Madison, USA	66.8
1936	F. Csik, Hungary	57.6	1936	H. Mastenbroek, Holland	65.9
1948	R. Ris, USA	57.3	1948	G. Andersen, Denmark	66.3
1952	C. Scholes, USA	57.4	1952	K. Szoke, Hungary	66.8
1956	J. Henricks, Australia	55.4	1956	D. Fraser, Australia	62.0
1960	J. Devitt, Australia	55.2	1960	D. Fraser, Australia	61.2
1964	D. Schollander, USA	53.4	1964	D. Fraser, Australia	59.5
1968	M. Wenden, Australia	52.2	1968	J. Henne, USA	60.0
1972	M. Spitz, USA	51.22	1972	S. Nielson, USA	58.59
1976	J. Montgomery, USA	49.99	1976	K. Ender, E. Germany	55.65
1980	J. Woithe, E. Germany	50.40	1980	B. Krause, E. Germany	54.79
1984	R. Gains, USA	49.80	1984	C. Steinseife, USA (tie)	55.92
1988	M. Biondi, USA	48.63	1984	N. Hogshead, USA (tie)	55.92
1992	A. Popov, Russia	49.02	1988	K. Otta, E. Germany	54.93
1996	A. Popov, Russia	48.74	1992	Z. Young, China	54.64
2000	P. vd Hoog., Ned	48.30	1996	L. Jingyi, China	54.50
2004	P. vd Hoog., Ned	48.17	2000	I. de Bruijn, Netherlands	53.83
2008	A. Bernard, Fra	47.21	2004	J. Henry, Australia	53.84
2012	N. Adrian, USA	47.52	2008	B. Steffen, Germany	53.12
2016	K. Chalmers, AUS	47.58	2012	R. Kromowidjojo, Netherlands	53.00
			2016	P. Oleksiak	52.70

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?