Name_____ Block_____

Olympic Freestyle

Year	Men	Women
1956	267.3	294.6
1960	258.3	290.6
1964	252.2	283.3
1968	249.0	271.8
1972	240.3	259.4
1976	231.9	249.9
1980	231.3	248.8
1984	231.2	247.1
1988	226.9	243.8

Men and women's times are in seconds.

1) Start Menu>Programs>Microsoft Excel

2) Enter the table above

3) Select the data>Click Format>Cells>Alignment: Horizontal – center
Vertical – center
>Borders: Pick a line style
Click Outline and Inside buttons
Click OK

4) With the table selected, Click the Chart Wizard button.
Choose the XY scatter plot
Next>Next
Chart Label>Title: Olympic Freestyle
x-axis: Year
y-axis: Time (sec.)
Next/Finish

5) Right Click one of the points>Add Trendline>Linear Type
>Click the options tab
Check: show equation box
Check show R^2 Value
Click OK
Drag the equation to a visible space near its line

Repeat step 5) for the other set of points.
You should have an equation for the men and the women.

Write the equations: Men_____R^2_____

Women_____R^2_____

6) Use the three cells just below the table.
The cell under the "Year" column will be the "x" cell. Use this cell for both equations.
The cell under the "Men" column is where you will enter the equation for Men.
The cell under the "Women" column is where you will enter the equation for Women.

To enter an equation in Excel, you click the cell where you will enter the equation and click the equal sign (=). This is like typing y =. Now type the rest of the equation.
Click the "x" cell for x.
You must use the asterisk (*) for any multiplication, ei. y = m*x+b
When you finish typing the equation, hit <enter>.You should see the y-intercept.

Enter the equation for the Men:

_____	=_____
Click the cell for y	type the rest of the equation "x" will be the "x" cell letter/number

In the cell to the right of the men equation, enter the equation for the women.

7) Enter various years into the "x" cell until you find the year when the men and women have the closest time.

What year is that?_____

8) Drag your graph under the table. Enter your name in a cell so you can identify your paper on the printer.

Print this page.

Save as "Olympic Freestyle"

Next, we'll clear the linear equations and try the polynomial fit as follows.

9) Right click the equation for the women and click Clear.
Right click the trendline >Click type tab>choose Polynomial
>Click the options tab
Check the show equation box
Check the show R^2 box

10) Do the same for the men.

Equations: Men_____R^2_____

Women_____R^2_____

11) Use the three cells just below the table.
The cell under the "Year" column will be the "x" cell. Use this cell for both equations.
The cell under the "Men" column is where you will enter the equation for Men.
The cell under the "Women" column is where you will enter the equation for Women.

To enter an equation in Excel, you click the cell where you will enter the equation and click the equal sign (=). This is like typing y =. Now type the rest of the equation.
Click the "x" cell for x.
You must use the asterisk (*) for any multiplication, and the caret (^) for exponents
ei. y = a*x^2+b*x+c
When you finish typing the equation, hit <enter>.You should see the y-intercept.

Enter the equation for the Men:

_____	=_____
Click the cell for y	type the rest of the equation "x" will be the "x" cell letter/number

In the cell to the right of the men equation, enter the equation for the women.

12) Enter various years into the "x" cell until you find the year when the men and women have the closest time.

13) What year is that?_____

14) Does a linear equation or a polynomial equation give a better prediction? Why?

_____

14) Drag your graph under the table. Enter your name in a cell so you can identify your paper on the printer.

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