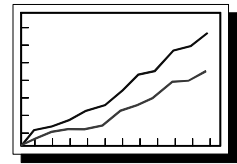




Name _____



LINE GRAPHS

Line graphs show relationships between two variables or sets of data. In other words, they show how one thing (variable) is affected by another variable and how the variables change depending on one another. They show how one variable thing varies with another.

Line graphs are useful for showing trends in data and for making predictions. They are very useful for showing trends over time; this means that they show how one variable is affected by the other as the variable increases or decreases.

To make a quality line graph:

1. Put the independent (manipulated) variable on the X-axis. The X-axis is the horizontal axis on the bottom of the graph.
2. Put the dependent (responding) variable on the Y-axis. The Y-axis is the vertical axis on the side of the graph.
3. Decide on an appropriate scale for each axis. The scale is the numbers used on the axes of the graph. The scale usually begins at zero. The scale of the graph is very important. The same data can be plotted on different scales and not look like the same data at all.
4. Select an appropriate interval for your graph. The interval is the amount of space between one number and the next or one type of data and the next on the graph. The interval is just as important as the scale.
5. Label each axis.
6. Plot the data points,
7. Connect the data points with a line.
8. Give the graph a descriptive title (ex: The Relationship Between ...)

One way to remember which data goes on which axis is **DRY MIX**

DRY	MIX
D – Dependent	M – Manipulated
R – Responding	I – Independent
Y – Y-axis	X – X - axis



Changing the scale or the interval changes the way a graph looks, and can change how the graph is interpreted. Make sure your interval and scale are appropriate for the data.



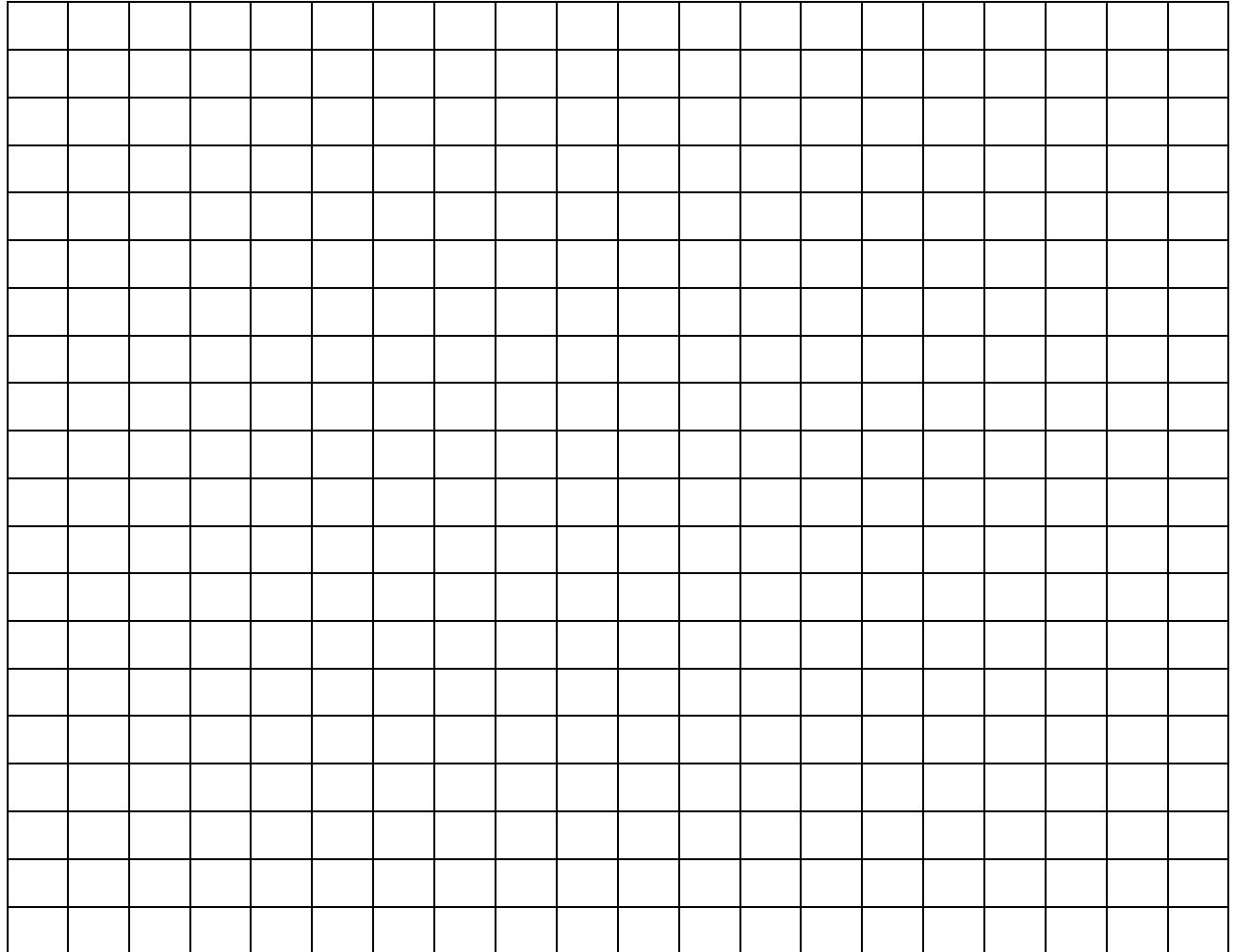
9. Label both of the axes with descriptive labels. Include units of measurement if appropriate.
10. Give the graph a title that describes the data.

One way to remember everything needed for a graph is **TAILS**.

TAILS
T – Title
A – Axis
I – Interval
L – Labels
S – Scale

Make a quality line graph of the following data:

San Antonio Spurs Franchise History – Games Won Each Year			
Year	Games Won	Year	Games Won
1976 – 77	44	1991 – 92	47
1977 – 78	52	1992 – 93	49
1978 – 79	48	1993 – 94	55
1979 – 80	41	1994 – 95	62
1980 – 81	52	1995 – 96	59
1981 – 82	48	1996 – 97	20
1982 – 83	53	1997 – 98	56
1983 – 84	37	1998 – 99	37
1984 – 85	41	1999 – 00	53
1985 – 86	35	2000 – 01	58
1986 – 87	28	2001 – 02	58
1987 – 88	31	2002 – 03	60
1988 – 89	21	2003 – 04	57
1989 – 90	56	2004 – 05	59
1990 – 91	55		



Analyze the data.

- a. What is the independent (what changed) variable? _____
- b. The dependent (what was measured) variable? _____
- c. What is the relationship between the two variables?

- d. What trends did you notice?

- e. Were there any years that didn't fit the overall pattern?

- f. Hypothesize about the pattern you found. Why do you think it happened? (You may already know this!)