

Prerequisite Skills

Lesson objectives

- I know how to identify and analyse graphs
- I know how to use a spreadsheet to create graphs

1.1

Lesson objectives

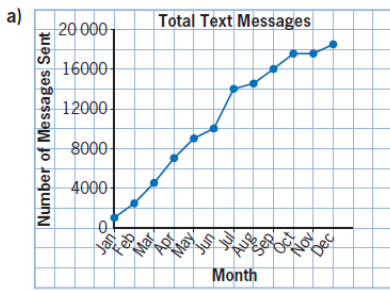
Teachers' notes

Lesson notes

MHR Page 194 #s 1 - 7

Solutions

1. Name each type of graph.

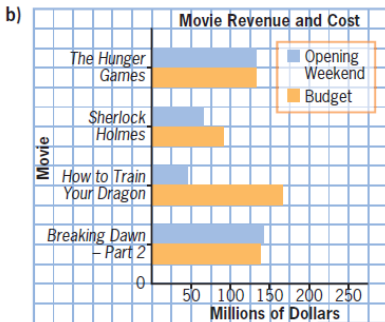


Line Graph

2. Use the graphs in #1 to answer the questions.

e) During which month do you think students had their cell phones taken away?

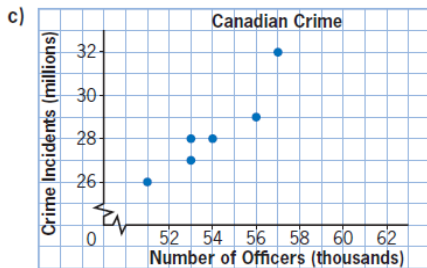
November - It is the only month where there is no increase in texts sent.



Dual Bar Graph

f) Which movie made the most money on its opening weekend?

Breaking Dawn Part 2 - It has the longest (blue) bar.



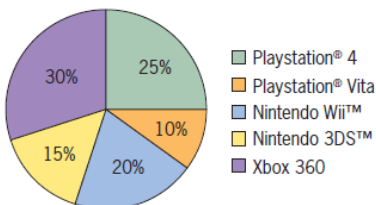
Scatter Plot

c) What trend seems to exist between number of officers and crime incidents?

As number of officers increase, the number of crimes increase!

1. Name each type of graph.

d) Favourite Game Console

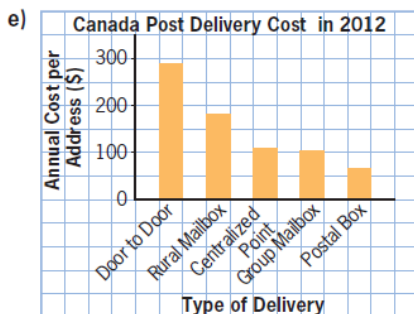


Circle Graph or Pie Chart

2. Use the graphs in #1 to answer the questions.

d) What is the most popular game console?

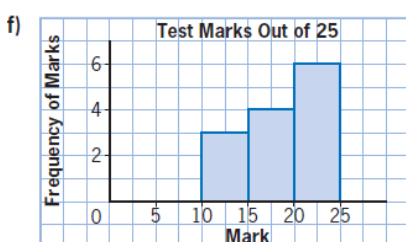
Xbox 360 - It has the largest sector (30%)



Bar Chart

b) Approximately how much does it cost to deliver mail to a centralized point?

\$110 - Read the value of the third bar.



Histogram

a) What intervals does the histogram show?

10 - 14, 15 - 19 and 20 - 24

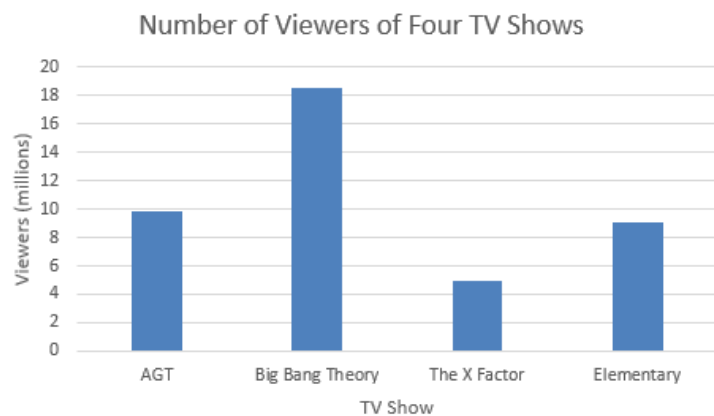
3. What is the difference between a bar graph and a histogram?

A bar graph shows the frequencies for qualitative data (non-numerical) and the bars have gaps between them.

A histogram is used for quantitative data (numerical) that has a continuous range of values in numerical order. There are no gaps between the bars.

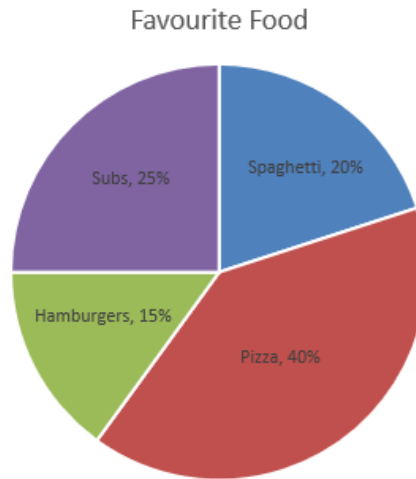
4. Create a bar graph to represent the data in the table. Include a title and label the axes.

TV Show	Viewers (millions)
<i>America's Got Talent</i>	9.8
<i>Big Bang Theory</i>	18.6
<i>The X Factor</i>	4.9
<i>Elementary</i>	9.1



5. Create a circle graph to represent the data in the table.

Favourite Food	Amount of People
Spaghetti	20%
Pizza	40%
Hamburgers	15%
Subs	25%

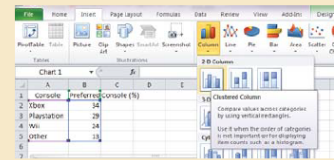


Example: Create a bar graph and a circle graph to represent the data in the table.

Console	Preferred Console (%)
Xbox	34
PlayStation	29
Wii	24
Other	13

Enter the data in a table in a spreadsheet.

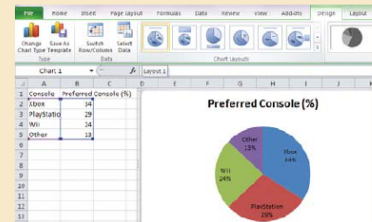
To create a bar graph, highlight the data. Then select **2-D Clustered Column** from the **Insert** menu.



Under **Chart Tools**, click **Layout**. Label the axes by clicking on **Axis Titles**.

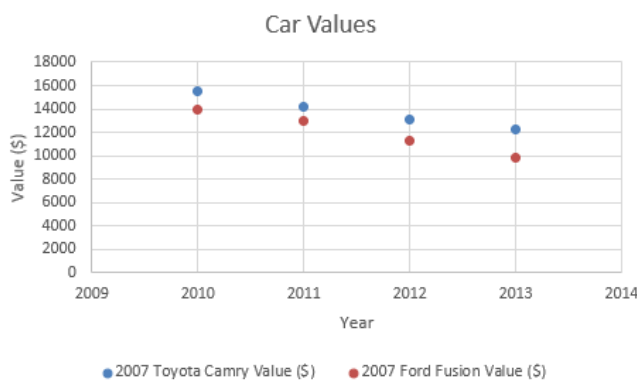
To create a circle graph, highlight the data. Then select **2-D Pie Chart** from the **Insert** menu.

Under **Chart Tools**, choose the **Design** tab to show the labels on the graph.



6. Use the same steps as above to create a scatter plot. Instead of selecting **Column** or **Pie** on the **Insert** menu, choose **Scatter**. Then, select **Scatter with only Markers**.

Year	2007 Toyota Camry Value (\$)	2007 Ford Fusion Value (\$)
2010	15 575	13 997
2011	14 230	12 924
2012	13 107	11 308
2013	12 224	9 831

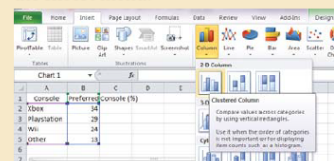


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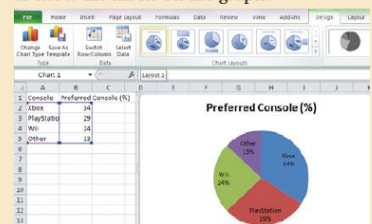
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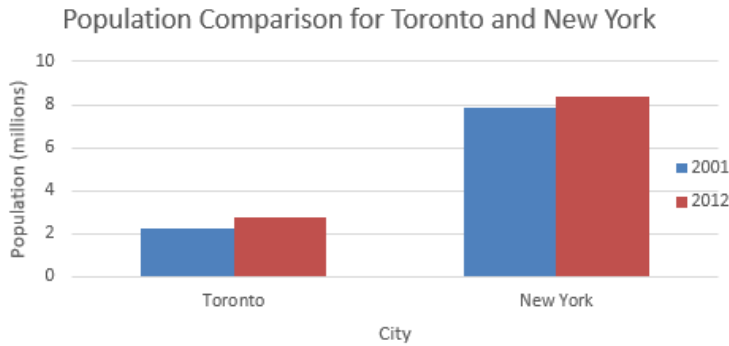
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Under **Chart Tools**, choose the **Design** tab to show the labels on the graph.



7. The data describe the change in population in New York and Toronto since 2001. Create a cluster bar graph to display the data.

City	Population in 2001 (millions)	Population in 2012 (millions)
Toronto	2.25	2.73
New York	7.86	8.34



Example: Create a cluster bar graph to compare the changes in price.

	2003 Price (\$)	2012 Price (\$)
Gasoline (1 L)	0.76	1.25
Milk (1 L)	2.20	2.45

Enter the data in a table in a spreadsheet.

Highlight the data. Then select **Clustered Column** from the **Insert** menu.

Reformat the chart to compare the price change in gas and milk independently. Right click on the chart and click on **Select Data**. Click on **Switch Row/Column**. The chart will now directly compare the price of each item.

