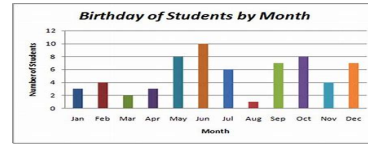


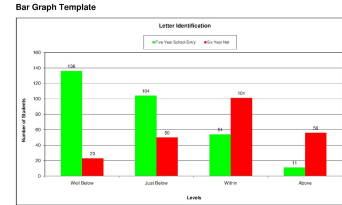
Grade 6 Math #7.6, Problem Solving - Choosing the right Graph

When to use certain graphs

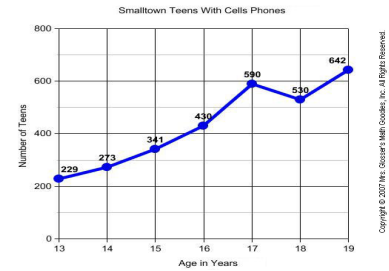
Bar graphs—suitable for make comparisons among data
 Bars are of equal width on a grid. The bars may be vertical or horizontal.



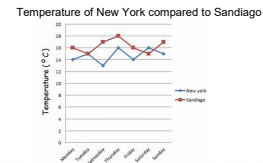
Double bar graphs—suitable for comparing two sets of data



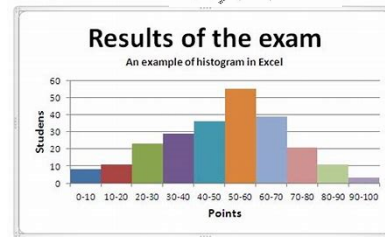
Line graphs—suitable for showing change over time or ages



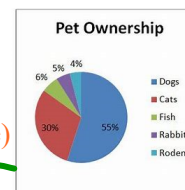
Double line graphs—suitable for comparing two sets of data over time



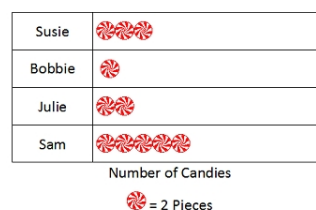
Histograms—suitable for showing data in equal intervals



Circle graphs—suitable for showing data that are parts of a whole (percentage)



Pictographs—suitable for showing data that are multiples of a number. It uses pictures and symbols to display data. Each picture or symbol can represent more than one object. A key tells what each picture represents.



What graph would you draw and why?
(Explain)



a)

Library Books Checked Out	
October	642
November	508
December	792
January	556

Data on library books checked out might be shown on a bar graph to compare the numbers of books or a line graph to show how the numbers changed over four months time.



b)

How Many Books Did You Read Last Year?

Interval	Tallies
0—9	
10—19	
20—29	
30—39	
40 or more	

Data on books read last year, students should say that a histogram is suitable because the data is presented in intervals of 10.



c)

What is Your Favorite Kind of Book?

	Boys	Girls
Mystery	29	23
Adventure	35	28
Science Fiction	14	20
Biography	8	17
Other	5	3

Data on favorite kinds of books, students may say that a bar graph would let them compare numbers; however, since data is given for both boys and girls, a double bar graph may be more suitable.



Class/Homework

Read page 267-268 for more examples

Must do a neat job
on grid paper

Page 269-270 #1, #2, #4

draw
graph

↓ tell me which graph
you would use and
why?

Quiz tomorrow

MUST KNOW

-What makes a question a good questions?

Must have options and one option is "other" so that everyone can answer all possible solutions can be expressed.

- What makes a question Biased? (Putting extra info in the question) (Using negative or positive description, so on)

- Read Data from graphs (Know how to read titles off graphs and axis)

-When to use a series of points (Discrete) or when to use continuous (line graph)

Discrete CANNOT have half of the item of interest

Continuous CAN have half of the item of measurement

Practice

1. Jon surveyed the Grade 6 students in his school to answer this question:
In which room of your home do you usually do your homework?
This table shows the data he collected.
- Draw a graph to display these data.
Explain your choice of graph.
 - Where do most students do their homework?
How does the graph show this?

Location	Number of Students
Kitchen	9
Bedroom	21
Living Room	14
Other	6

2. Zena surveyed the Grade 6 students in her class to answer this question:
What is your favourite flavour of fruit juice?
This table shows the data she collected.

Girls		Boys	
Flavour	Number of Students	Flavour	Number of Students
Apple	3	Apple	6
Orange	4	Orange	3
Cranberry	7	Cranberry	2
Grape	1	Grape	3
Other	0	Other	2

- Draw a graph to display these data.
Explain your choice of graph.
- Which flavour of juice is most popular? Explain.



3. a) Choose an appropriate method to collect data to answer this question:
 What do the students in your class like most about summer?
 Explain your choice.
- b) Collect the data. Record the results.
- c) Draw a graph to display these data.
 Explain your choice of graph.
- d) Use the graph to answer the question in part a.
 Explain your answer.



4. Jeremy conducted an experiment to answer this question:
 How fast does the centre of a potato cool down after it is removed from boiling water?
 The table shows the data he collected.
- a) Draw a graph to display these data.
 Explain your choice of graph.
- b) What conclusions can you make from the graph?

Time (min)	Temperature (°C)
0	91
5	80
10	67
15	58
20	50
25	45
30	41
35	37
40	34

5. For each question below:

- Choose an appropriate method to collect data to answer the question. Explain your choice.
- Collect the data. Record the results.
- Draw a graph to display the data.
Explain your choice of graph.
- Answer the question.

What other conclusions can you make from your graph?

- a) What was the greatest temperature outside your classroom during a school day?
- b) When you toss 2 pennies, which outcome shows most often: 2 heads, 2 tails, or a head and a tail?

6. Demetra used *The Globe and Mail* Web site to collect data to answer this question: In the first week of January 2008, when would I have had the most American money for a Canadian dollar?

This table shows the data collected.

- a) Draw a graph to display these data.
Explain your choice of graph.
- b) Answer the question above.
- c) What has happened to the value of the Canadian dollar since January 2008?
How could you find out?

Day	Value of \$1 Can in US cents
Jan. 1	100.9¢
Jan. 2	100.7¢
Jan. 3	100.9¢
Jan. 4	99.9¢
Jan. 5	99.4¢
Jan. 6	99.6¢
Jan. 7	99.0¢