



## Warm Up

Date Feb 10



Which method would you use to collect data to answer this question. How many push ups can you do in 1 min? Explain your method.

Step 1

→ Have someone do push ups for 1 min as you time them, with a timer and count. Record as trial 1



Step 2.

→ Break for 5min

→ Repeat Step 1

→ Complete 3 trials.

# we did experiments

Name \_\_\_\_\_ Date \_\_\_\_\_

Master 7.12

## Step-by-Step 2

### Lesson 2, Question 3

**Step 1** Which letter of the alphabet do you think is used most often in the English language? \_\_\_\_\_ Why do you think so?

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**Step 2** Choose a paragraph from a book you are currently reading.  
Count the number of times each letter occurs in the paragraph.  
Record the results in the tally chart.

A	B	C	D	E	F	G	H	I	J	K	L	M
N	O	P	Q	R	S	T	U	V	W	X	Y	Z

**Step 3** Which letter occurs most often? \_\_\_\_\_

**Step 4** Write 2 other things you know from your data.

1. \_\_\_\_\_  
\_\_\_\_\_
2. \_\_\_\_\_  
\_\_\_\_\_

SP3 Graph collected data and analyze the graph to solve problems.

SP4 Demonstrate an understanding of probability by: • identifying all possible outcomes of a probability experiment • differentiating between experimental and theoretical probability • determining the theoretical probability of outcomes in a probability experiment • determining the experimental probability of outcomes in a probability experiment • comparing experimental results with the theoretical probability for an experiment.

SCO: <b>SP3: Graph collected data and analyze the graph to solve problems.</b> [C, CN, PS]			
[C] Communication [T] Technology	[PS] Problem Solving [V] Visualization	[CN] Connections [R] Reasoning	[ME] Mental Math and Estimation

**Scope and Sequence of Outcomes**

Grade Five	Grade Six	Grade Seven
SP2 Construct and interpret double bar graphs to draw conclusions.	SP3 Graph collected data and analyze the graph to solve problems.	SP3 Construct, label and interpret circle graphs to solve problems.

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## Interpreting Graphs

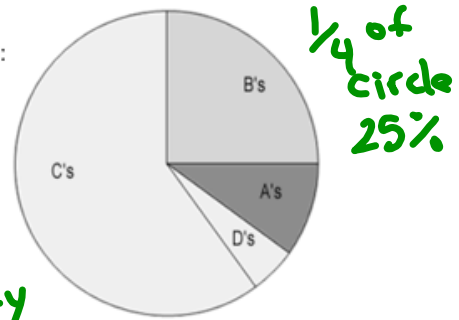


Interpreting graphs means reading information from a graph and drawing a conclusion from the data

Example)

1. Mr. M's class grades were graphed as a pie graph. Based on this graph:

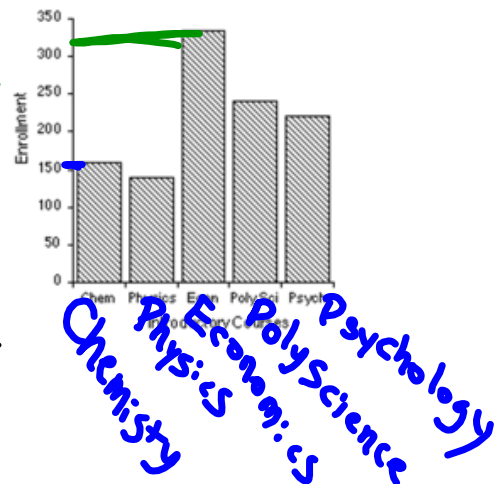
- a) The largest percentage of students received what grade? C
- b) The smallest percentage of students received what grade? D
- c) Estimate what percentage of the class received a B. 25%
- d) Based on the graph, do you think Mr. M's class is hard?  
Why or why not?



This data does not display the level of difficulties in the class.  
But we do see on a small % is failing with D.

2. The bar graph compares the number of students enrolled in classes.

- a) What class has the highest enrollment? Tallest Bar  
Econ 325 students
- b) How many students are enrolled in Chemistry (chem.)? ~160
- c) How many are enrolled in Psychology (Psych)? ~220



## Interpreting Line Graphs

MUST STUDY

**Discrete Data** is a line graphs that is series of dots (not connected)

This is for data in which cannot have "part of" an object.(Counted)

Ex) Can't have part of people so don't connect

Ex) A store that sells helmets won't sell 2 and a half helmets

**Continuous Data** is a line graphs that is connected

This is for data in which can have "part of" an object. Includes decimals. No gaps in data (Measured)

Ex) Can have part of a dollar

Ex) Can have part of a year or time

Volume or Capacity are continuous  
Area or Perimeter

Recall a graph must have the following

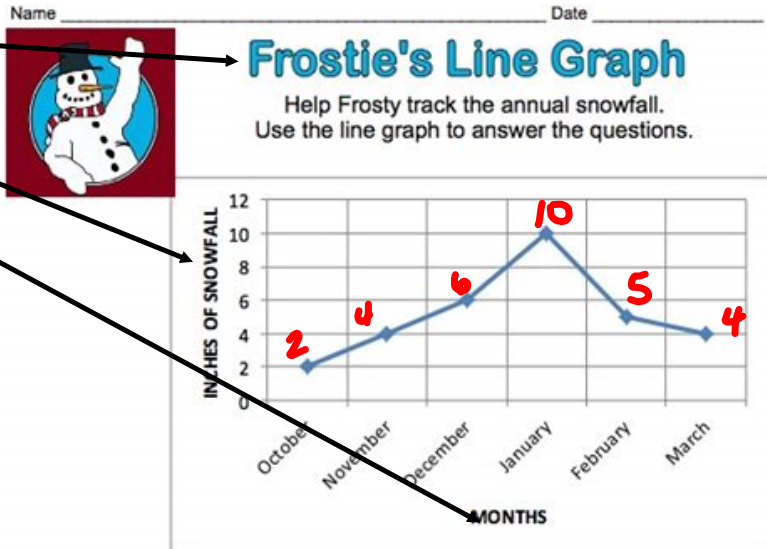
A main title

Vertical axis title

Horizontal axis title

Label/Scale on vertical axis

Label on horizontal axis

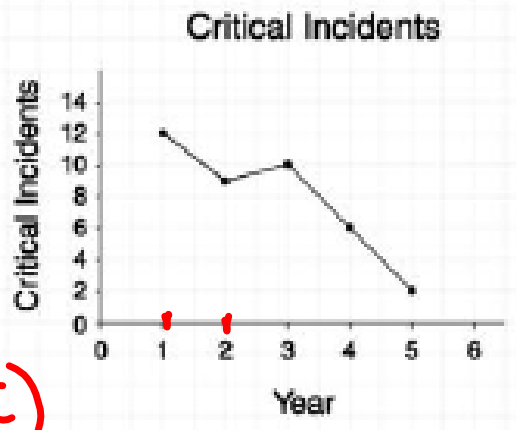


- Which month had the greatest snowfall? Jan
- Which month had the least snowfall? Oct
- Which months had the same amount of snowfall? March and November
- How many inches of snow fell in December? 6 inch
- How many more inches fell in January than February? 10-5=5in
- Which month had five inches of snow? Feb
- Which month had eight inches less snow than January? 6-8=2 Oct
- What was the total amount of snowfall in all six months? \_\_\_\_\_

$$2 + 4 + 6 + 10 + 5 + 4 = 31 \text{ inches}$$

Example)

A rating of 4 or 5 is called a critical incident. The line graph shows the frequency of critical incidents (for coaches, spectators, and players) for a minor hockey association over a five-year period.



a) Which year had the most critical incidents? **Year 1 with 12 (CI)**

b) Which year had the fewest critical incidents? **Year 5 (2 CI)**

c) Do you think that behavior at games is getting better or worse?  
Explain.

**Better because the CI went from 12 in year 1 down to 2 in Year 5. (Decreased mainly each each)**

# Class/Homework

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#1,

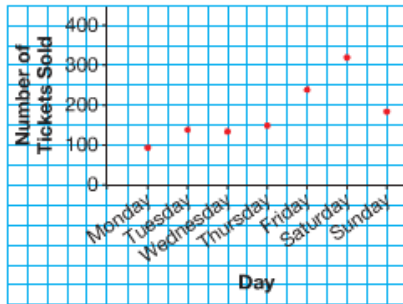
We can save some for tomorrow if not done in class today



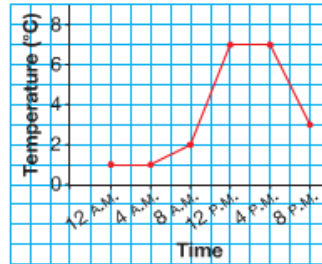
**Practice**

- For each graph below:
  - What is the title of the graph?
  - What does each axis show?
  - Why are the points not joined or joined?  
Are the data discrete or continuous?
  - What conclusions can you make from the graph?

a) **Number of Tickets Sold at the Local Theatre Over 1 Week**



b) **Temperature in Whistler, BC, April 7, 2008**

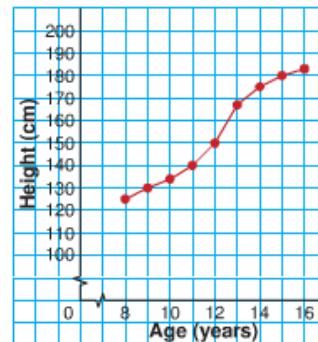


- Would you use a line graph or a series of points to display each set of data? Explain your choices.
  - the temperature of a cup of boiling water as it cools
  - the number of goals scored by Jarome Iginla over the last 10 weeks of the 2007–2008 season
  - the mass of a puppy in its first year
  - the distance travelled by a cross-country skier as she completes the course

- What does this line graph show?
  - About how tall was Nathan at each age?
    - 8 years
    - 12 years
    - 15 years
  - During which year did Nathan grow the most? The least? How does the graph show this?

We use a jagged line to indicate we are not showing all the numbers.

**Nathan's Growth**

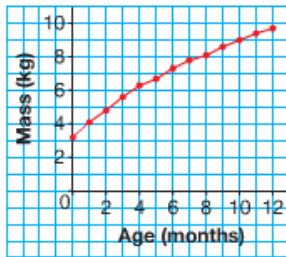




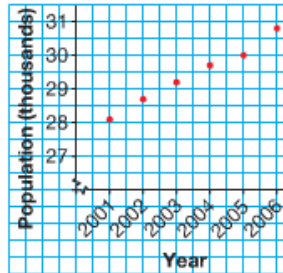
4. Look at the three graphs below.



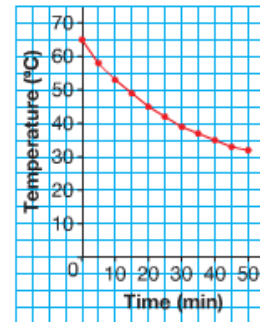
i) My Baby Sister's First Year



ii) Population of Nunavut, 2001–2006



iii) How My Hot Chocolate Cooled



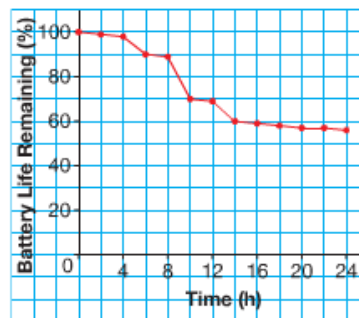
- How are the graphs alike? How are they different?
- What conclusions can you make from each graph?



5. Marina measured the life left in her cell phone battery every two hours for 24 h. She used a line graph to display the data.

- What happened in the first 4 h?
- What happened between hours 4 and 6?
- How many times might Marina have used her cell phone? Explain.
- Between which two hours did Marina use her cell phone the most? How do you know?
- What percent of the battery life remained after 24 h?
- What other conclusions can you make from the graph?

My Cell Phone Battery



## Attachments

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Alphabet Experiment.docx

Blinking Experiment.docx

Spoon Experiment.docx