A bar graph has 4 parts:

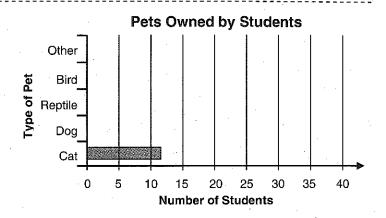
- a vertical and horizontal axis
- a scale
- labels (including a title)
- data (given by the bars)



The bars in a bar graph can either be vertical or horizontal. The scale tells how much each square on the axis represents. The labels indicate what the data in the bars is.

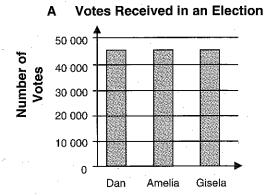
1.

Pets Owned by Students	Number of Students		
Cat	12		
Dog	15		
Reptile	6		
Bird	3		
Other	10		



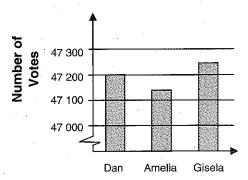
- a) Complete the bar graph.
- b) What scale was used in the bar graph? Do you think it was a good choice? Why or why not?
- c) Would you predict similar results for the students in your class? Explain.

2.



- a) Find the scale on each bar graph.
- b) Which graph makes it easier to tell the difference in votes for each candidate?
 - c) Who won the election?

B Votes Received in an Election



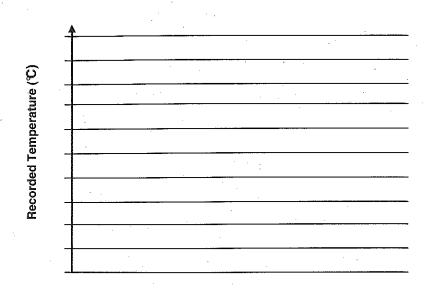
Graph A: start at _____, count by _____, stop at _____.

Graph B: start at _____, count by _____, stop at ____

3. Complete the bar graph to display the following data.

Recorded Temperatures by City (in °C)				
Brandon, MB	25℃			
Medicine Hat, AB	27°C			
Iqaluit, NU	12°C			
Yarmouth, NS	21℃			
Thunder Bay, ON	24°C			

HINT: Use the letters B, M, I, Y, and T as short forms for the city names on your graph.



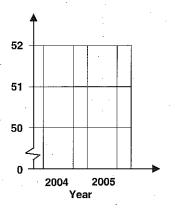
 A skateboard company had \$50 000 in sales in 2004, and \$52 000 in sales in 2005.
 Show this data using the following two scales.



60

Graph A

Sales (\$1000)



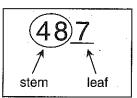
City

- a) Which graph makes it appear as though the sales in 2005 were three times the sales in 2004?
- c) Which graph do you think best represents the data? Explain.
- b) Which graph makes it appear as though the sales in 2005 were only slightly more than the sales in 2006?
- 5. What scale would you use if you had to plot the following numbers? (Say what numbers the scale would stop and start at, and what size the intervals would be). Explain your choices.
 - a) 3, 2, 7, 9, 10
 - c) 250, 1000, 2000

- b) 14, 2, 16, 4, 8
- d) 12000, 11500, 12500

The leaf of a number is its right-most digit.

The **stem** is all its digits except the right-most digit. NOTE: The stem of a one-digit number is 0 since there are no digits except the right-most one.



- 1. Circle the stem and underline the leaf.
 - a) 5 no stem b) (3)7
- c) 124 d) 51
- e) 9 000
- f)
- 2. In each group of numbers, circle the stems and write the stems from smallest to largest.
 - a) (2)3 9 8 (3)4 (6)5 (2)8 (2)5
- b) 36 39 46 51 37 9 45
- c) 107 88 87 75 104 96

- 3. In the data set 38 29 26 42 43 34, the stems are 2, 3 and 4. To build a stem and leaf plot, follow these steps.

Step 1:			<u>Step 2</u> :		ero populario de la composition della compositio	<u>Step 3</u> :	an magadaga acaman n Muunin nunggu magada	MARS II REEDINING MARKUNGA POOCOGE CUNTO GOOD BOOMIN
Write the stems	stem	leaf	Then write each	stem	leaf	Finally put the	stem	leaf
in order, from smallest to largest. 2 3	2 3 4		leaf in the same row as its stem:	2 3 4	96 84 23	leaves in each row in order, from smallest to largest.	2 3 4	69 48 23
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For each plot, put the leaves in the correct order. Then list the data from smallest to largest.

stem	leaf		stem	leaf
2	51	_	2	15
4	851		4	
, c. 5 _:	62		5	
21 21	 -	•		

stem leaf stem leaf 0 7 1 93 2 580

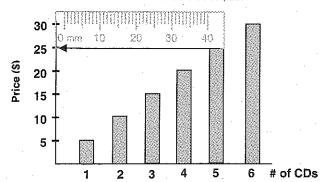


- 4. Use the following data to create stem and leaf plots.
 - a) 8 7 13 18 10
- b) 99 97 103 99 101
- c) 77 91 105 97 112 114 96 78
- 5. Stem and leaf plots make it easy to find the lowest and highest data values.
 - Look for the smallest leaf in the first row to find the lowest data value.
 - ii) Look for the largest leaf in the last row to find the highest data value.

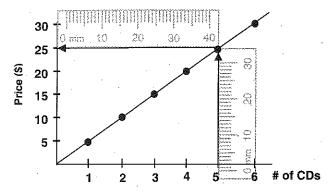
The range of a set of data is the difference between the lowest and the highest value. Find the range of the data sets in questions 4 and 5.

The bar graph and the line graph below both show the price of CDs on sale.

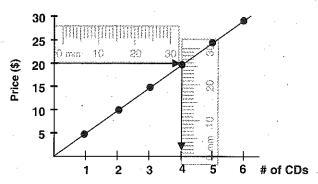
Using a ruler, you could draw an arrow across from the '5 CD' bar to show 5 CDs cost \$25.



Similarly you could draw a line up from the '5 CD' mark and then across to the \$25 mark.

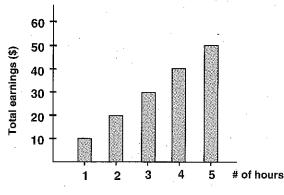


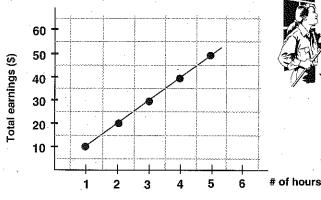
- Draw arrows (using a ruler!) on the line graph above to find the cost of ...
 - 3 CDs: \$ _
- b) 4 CDs: \$_
- c) 6 CDs: \$
- 2. To find out how many CDs you can buy for \$20, you could draw arrows as shown.



Draw arrows (using a ruler!) on the line graph to find how many CDs you can buy for:

- \$15: CDs a)
- \$25: ____ CDs
- \$30: ____ CDs
- 3. These graphs show how much money Sally will earn painting houses in the summer.





- On both graphs, show how much Sally would make for working:
- i) 3 hours
- 4 hours
- Draw arrows on the line graph to show how much Sally will earn in $3\frac{1}{2}$ hours.
- Extend the line graph to show how much Sally could make in:
- i) 6 hours
- ii) $\frac{1}{2}$ hour

- Explain an advantage of a line graph over a bar graph.