

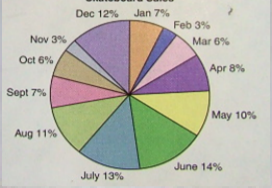
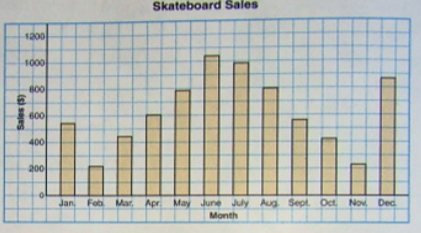

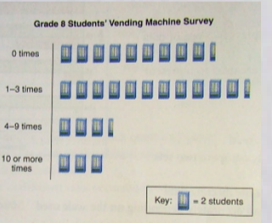
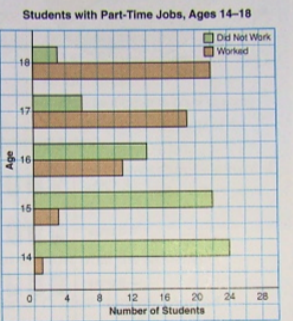
(Gr. 8)

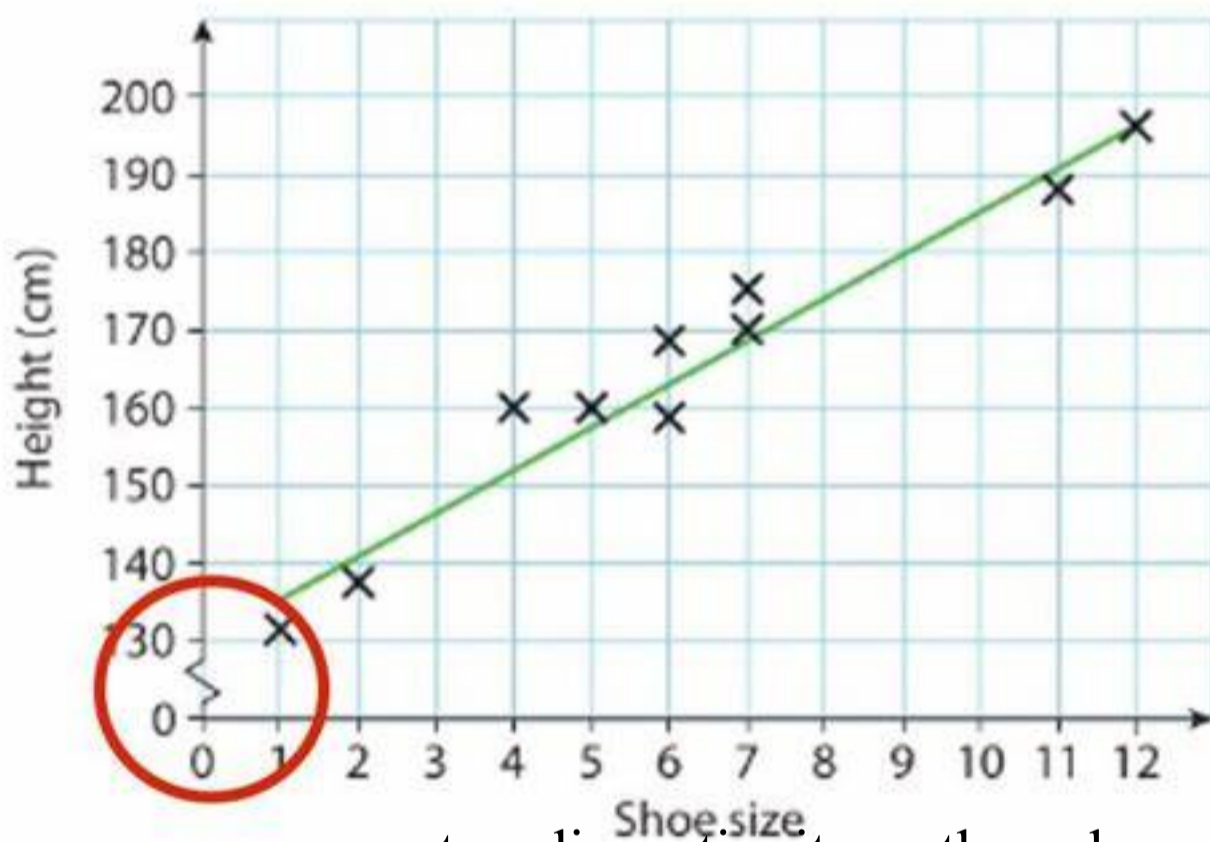
Data Analysis & Probability



Choosing an Appropriate Graph

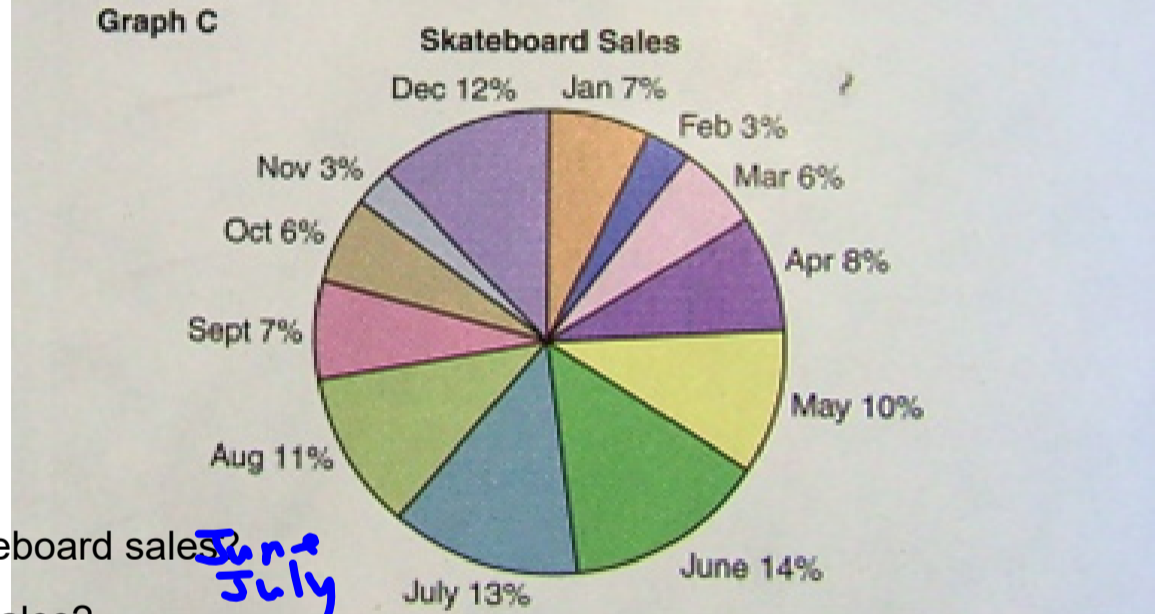
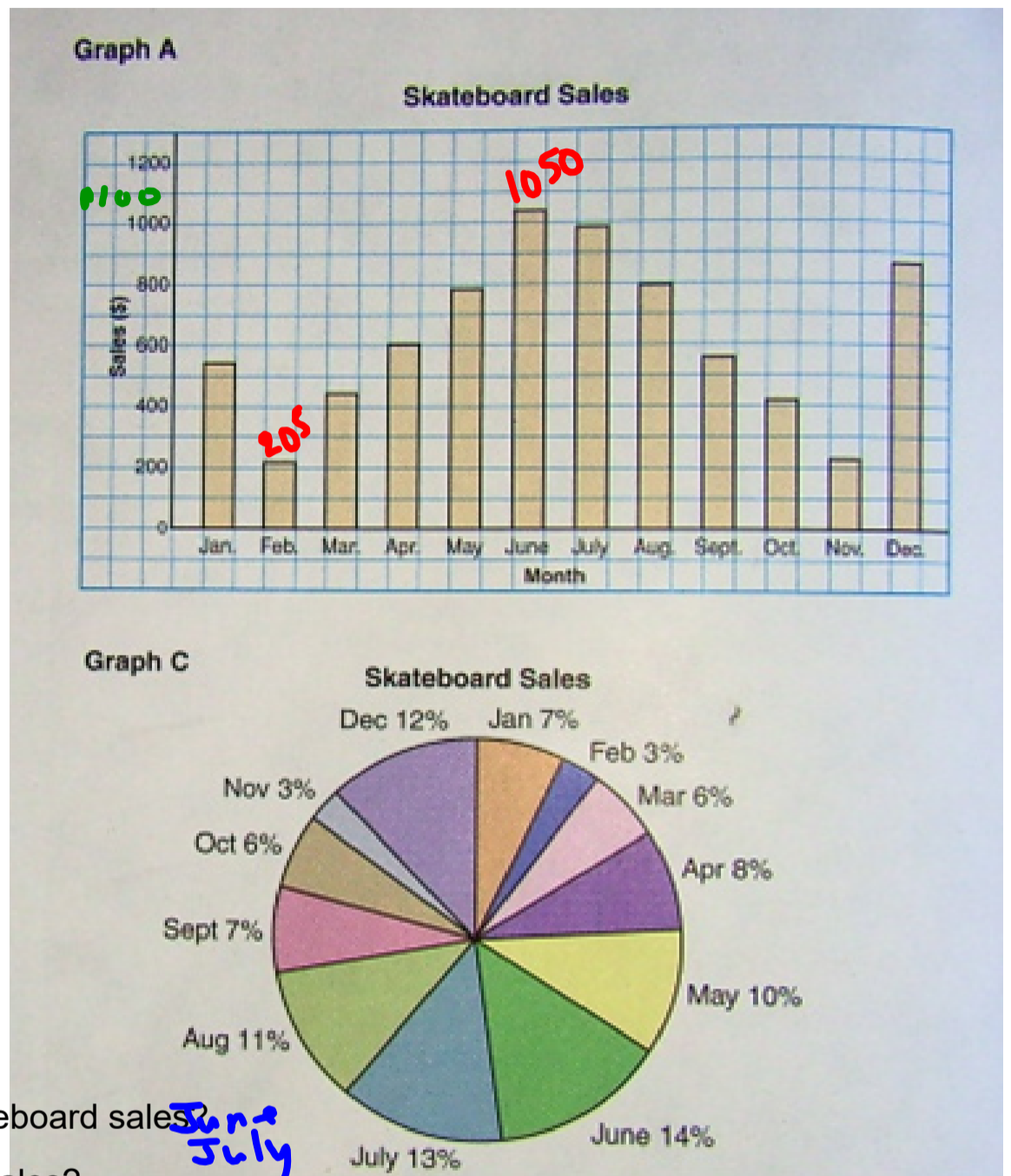
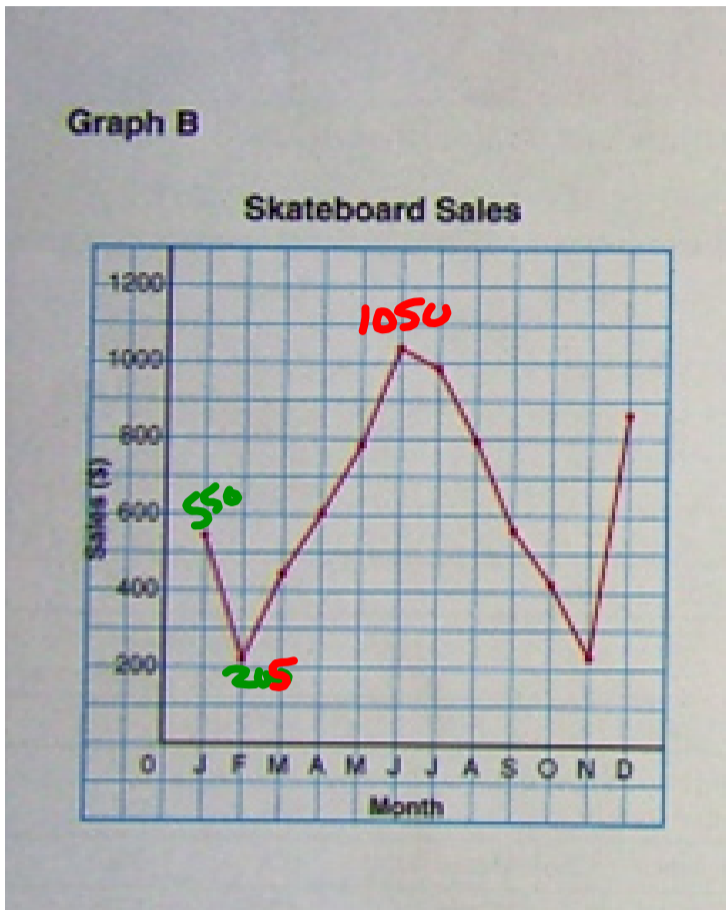
Also see page for more examples

Type of Graph	Strengths	Limitations
Circle Graph 	<ul style="list-style-type: none"> Shows parts of a whole Shows <u>percents of the total</u> Sizes of sectors compare parts of the whole 	<ul style="list-style-type: none"> Does not show data values and the total Difficult to draw accurately
Bar Graph 	<ul style="list-style-type: none"> Lengths of bars compare data values Scale can be used to find the total Easy to draw 	<ul style="list-style-type: none"> May be difficult to read depending on scale used Does not show percents of the total for comparison
Line Graph 	<ul style="list-style-type: none"> Easy to draw and to read Shows data changes over time Can be used to estimate values between or beyond data points 	<ul style="list-style-type: none"> Does not show parts of a whole Zig-zag pattern can be difficult to interpret
Pictograph page 384 	<ul style="list-style-type: none"> Lengths of rows of symbols compare data values Graph is visually appealing Key can be used to find the total 	<ul style="list-style-type: none"> Large number of symbols make it difficult to read Does not show parts of a whole Difficult to draw
Double Bar Graph 	<ul style="list-style-type: none"> Directly compares two sets of data Lengths of bars compare data values Scale can be used to find the total of each data set Easy to draw 	<ul style="list-style-type: none"> Can only be used to show discrete data May be difficult to read depending on scale used Two sets of data in one graph can be confusing



represents a discontinuity as the value of Y jumps from 0 to 130. [SEP]

-No data represent below height of 130 cm



What do you know from each graph?

Which graph is the MOST helpful in

- a) Which 2 months had the greater skateboard sales?
- b) What is the range in the skateboard sales?
- c) What percent of skateboard sale occurred in May?

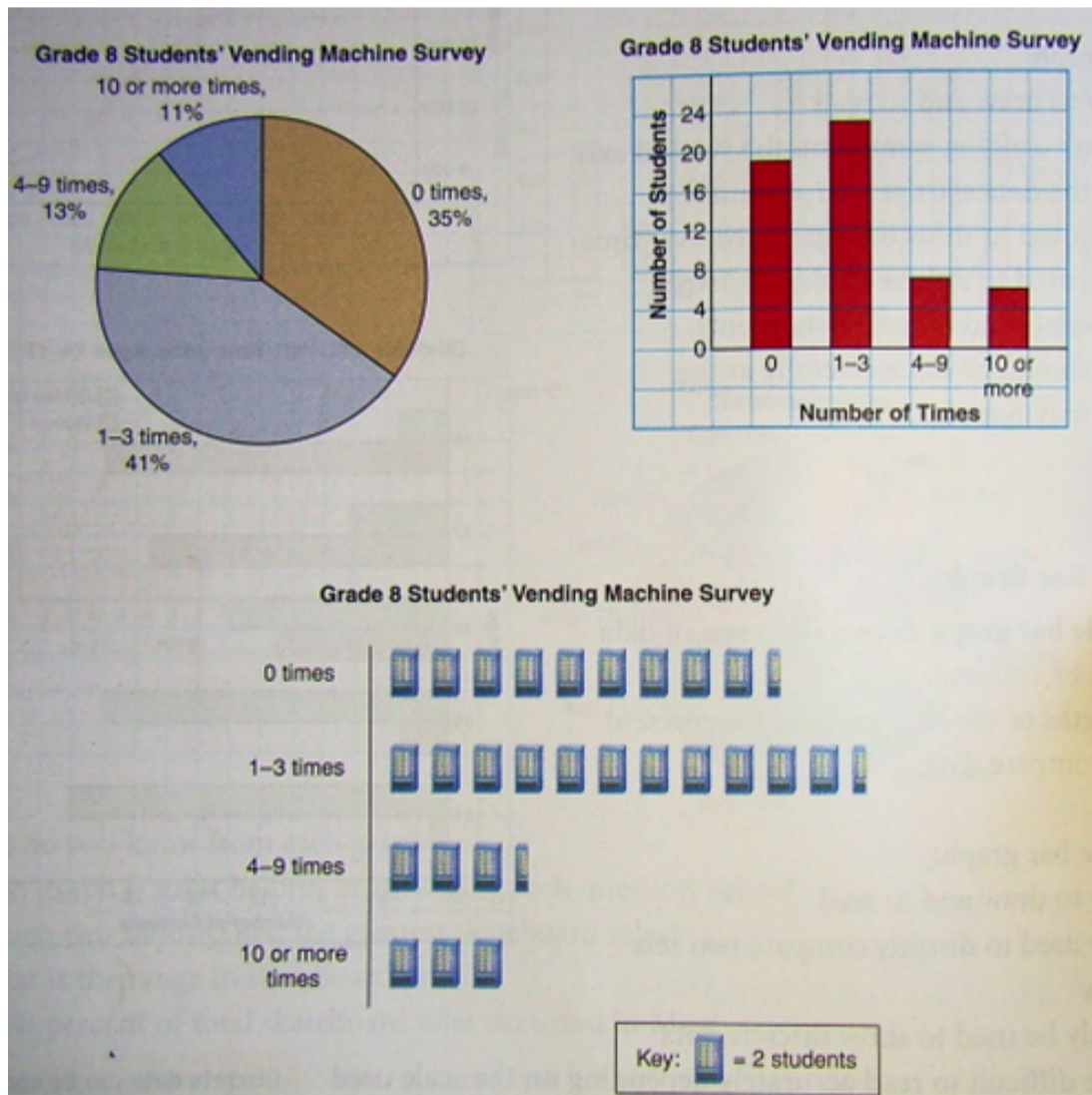
b) Range \Rightarrow highest \$ - lowest \$
 (Bar graph) $\$1050 - \$205 = \$845$

c) % of skateboard sales May is 10% (Circle graph)

Three students surveyed Grade 8 students in their school. They asked: "How many times did you use a vending machine last week: 0 times, 1-3 times, 4-9 times, or 10 or more times?" Amrit displayed the results on a circle graph.

Fred used a bar graph. Stella used a pictograph.

- What are the strengths and limitations of each graph?
- Which graph is appropriate? Justify your answer.



This table shows the favourite types of video games of the Grade 8 students at L'ecole Orleans.

- a) Graph these data.
Justify your choice of graph.
- b) What are the advantages and disadvantages of the graph you drew?

Type	Number of Students
Action	15
Role Playing	10
Arcade	4
Strategy	7
Simulation	11
Other	3

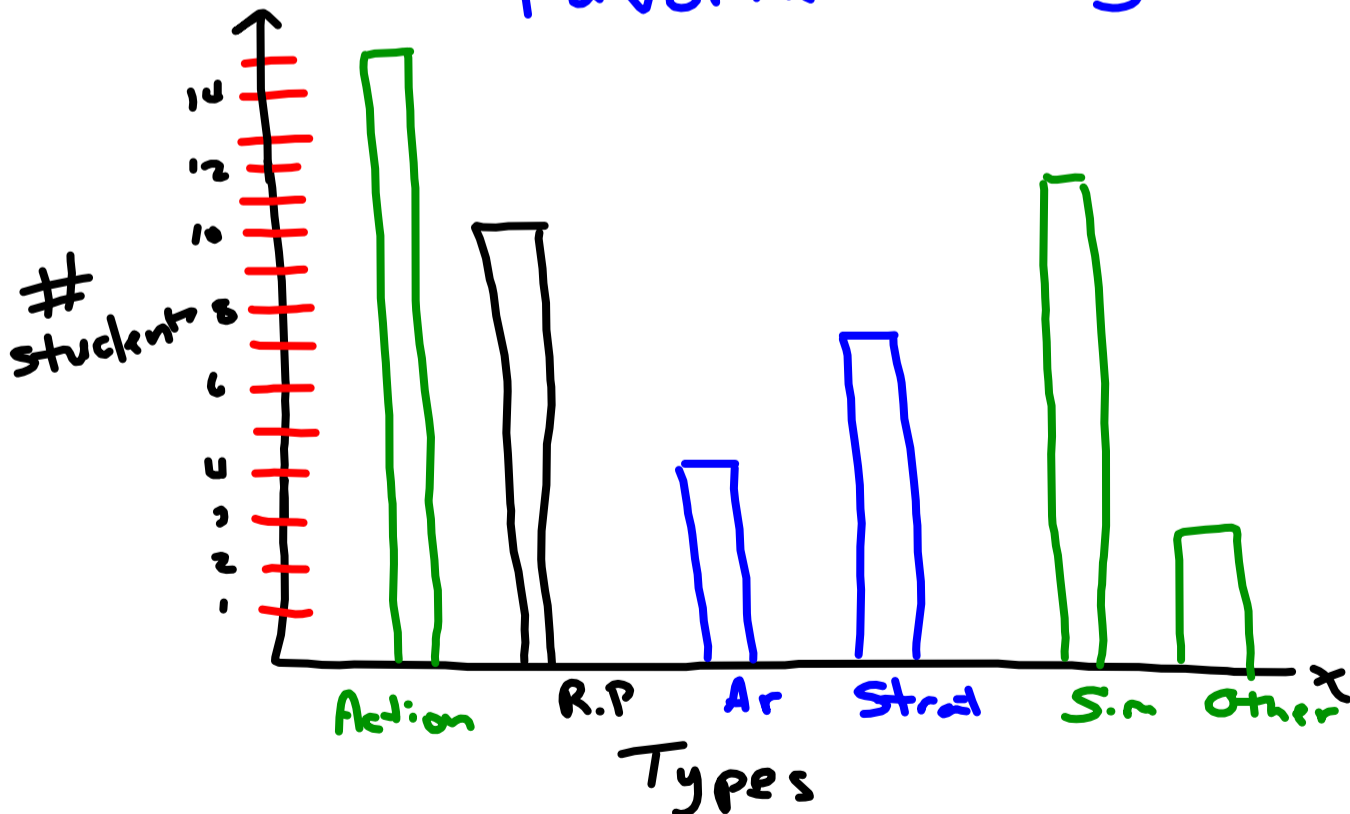
Total \Rightarrow 50

~~$$\text{Action} = \frac{15}{50} = \frac{30}{100} = 30\%$$

$$\text{Sector} = 0.30 \times 360 = 108^\circ$$
 Protractor~~
 Too much work

Bar graph

Favorite video games



This table shows the favourite types of video games of the Grade 8 students at L'ecole Orleans.

- a) Graph these data.
Justify your choice of graph.
- b) What are the advantages and disadvantages of the graph you drew?

Type	Number of Students
Action	15
Role Playing	10
Arcade	4
Strategy	7
Simulation	11
Other	3

Total : 50

Action $\frac{15}{50} = \frac{30}{100} = 30\%$

30% of 360

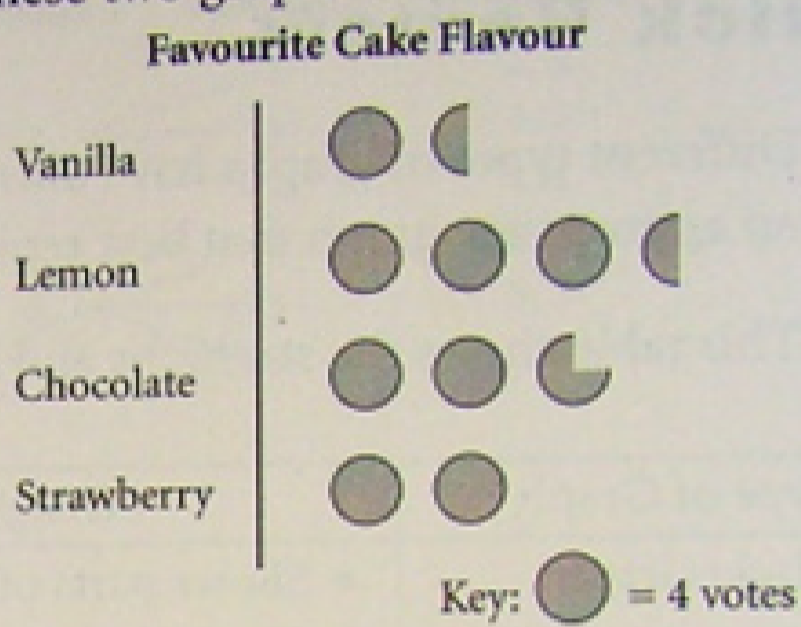
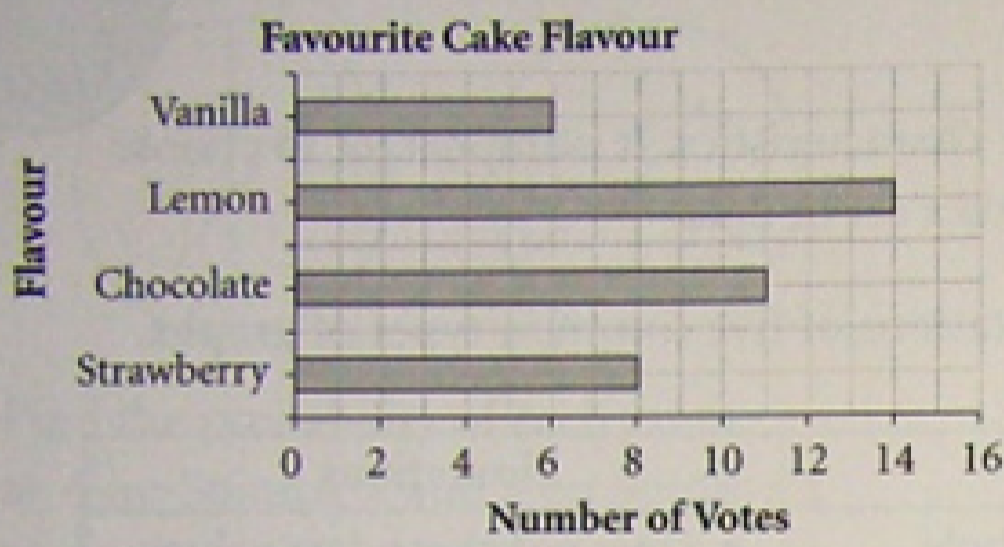
$0.30 \times 360 = 108^\circ$

Class/Homework

pg. 387 # 1, 3, 5, 6, ~~8~~, 11

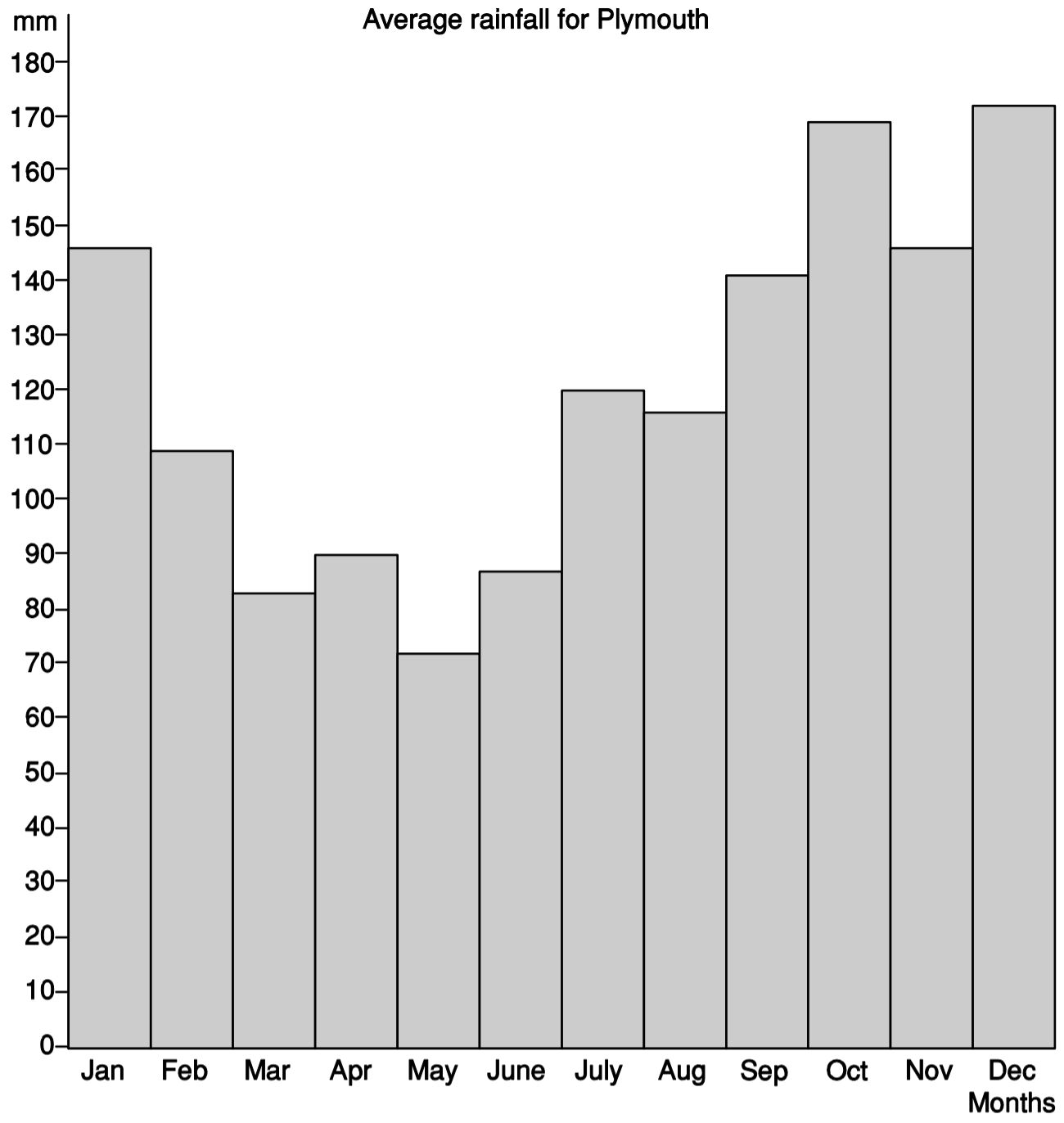
Answers pg 526

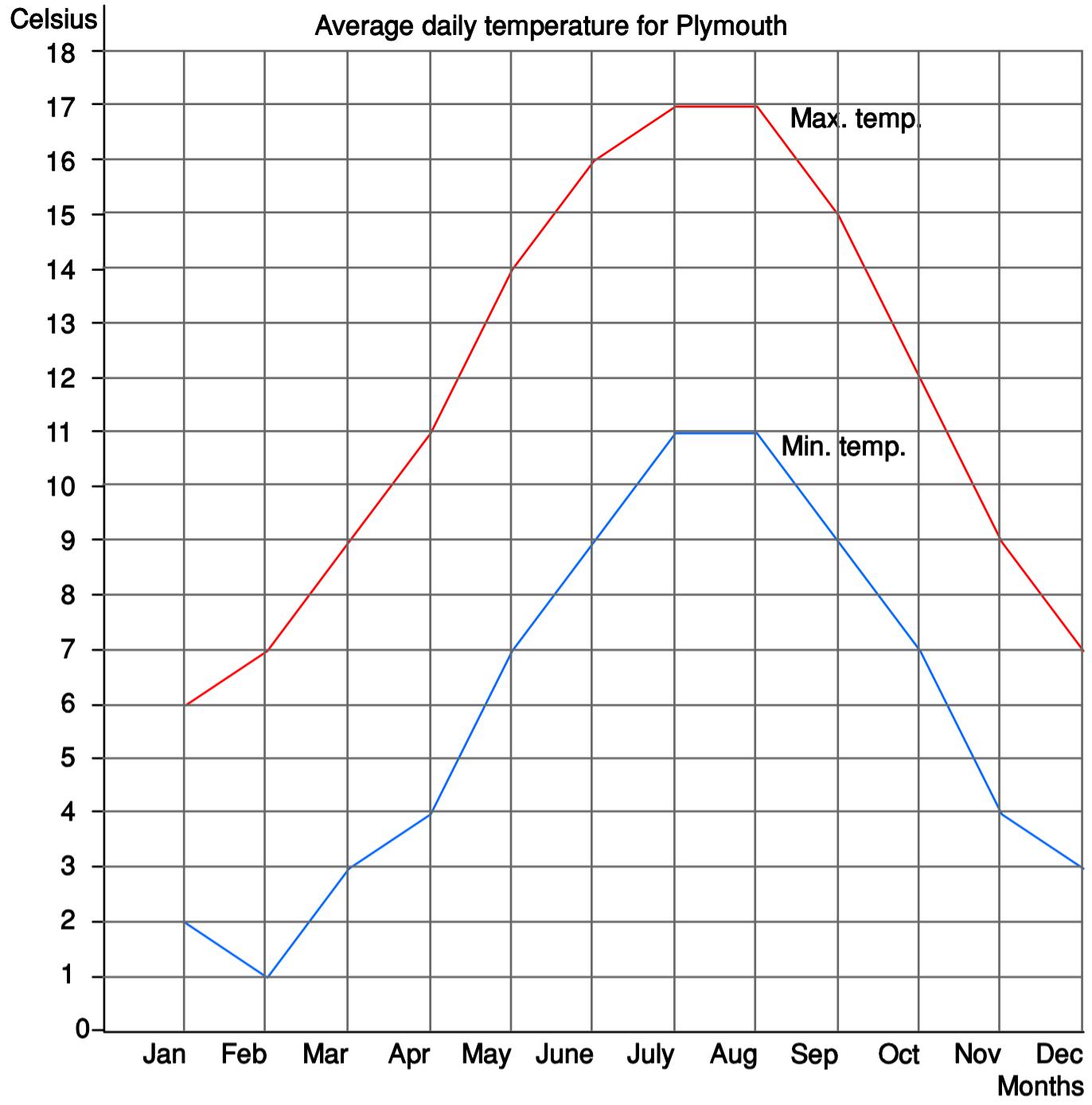
Rebecca's family hosted a party to gather opinions on the choice of flavour for her sister's wedding cakes. The guests' votes are displayed in these two graphs.

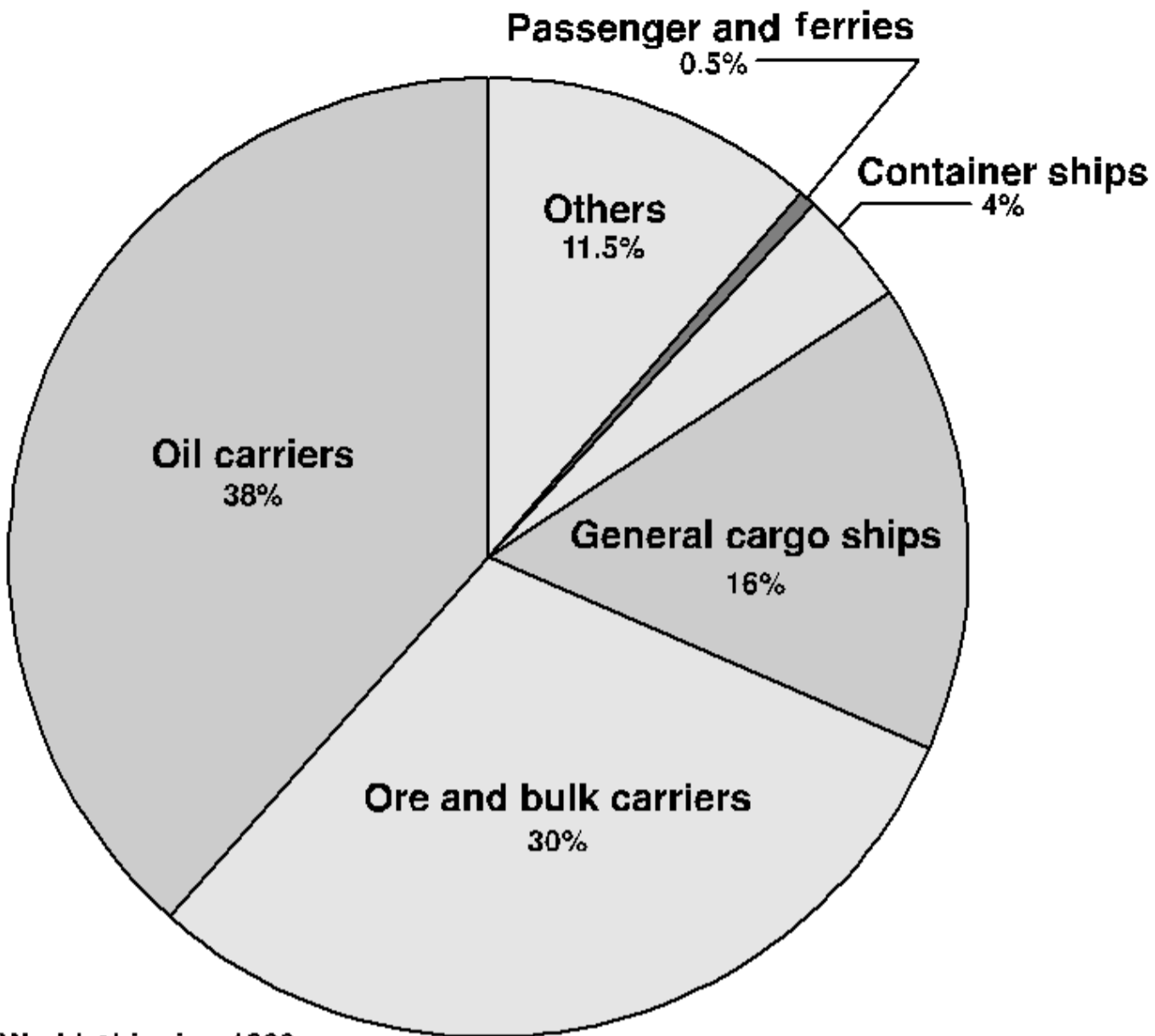


- a) Which flavour is the most popular? _____ the least popular? _____
- b) How many people voted at the party? $6 + 14 + \underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$
- c) From which graph is it easier to gather the information? Explain.

Average rainfall for Plymouth







World shipping 1989
Types of vessel by dead weight tonnage