Warm Up Grade 8

Date: _____

Dec. 10

Use mental math:

1) $10 - $4.88 = 5.12

2) 56 ÷ 100 = 0.56

3) 25% of 12 = 3

4) 1250 ÷ 5 = 250

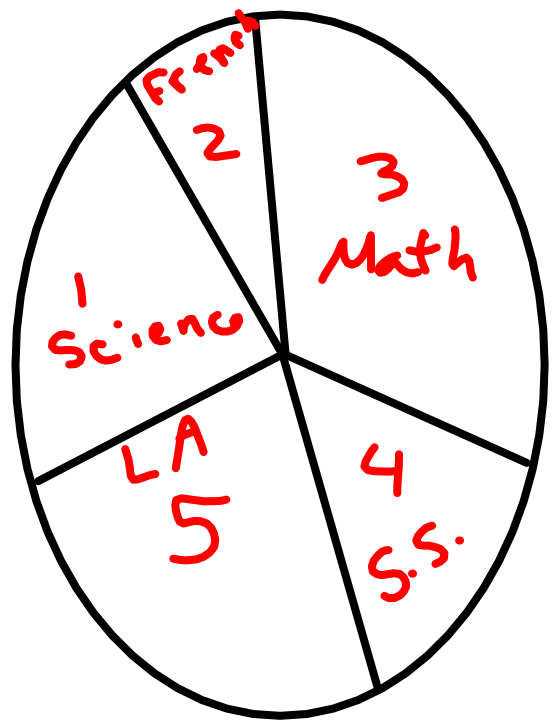
1250 ÷ 10 = 125

1250 ÷ 5 = 250

From Yesterday

Use the data in the table below.
Match the correct percentages with the correct sectors in the graph.
Label the graph correctly and create an appropriate title for the graph.

Math	30%	3
Social Studies	15%	4
Language Arts	25%	5
Science	20%	1
French	10%	2



Ws 158 --> Solutions

pg. 158 # 1-5

Homework Solutions

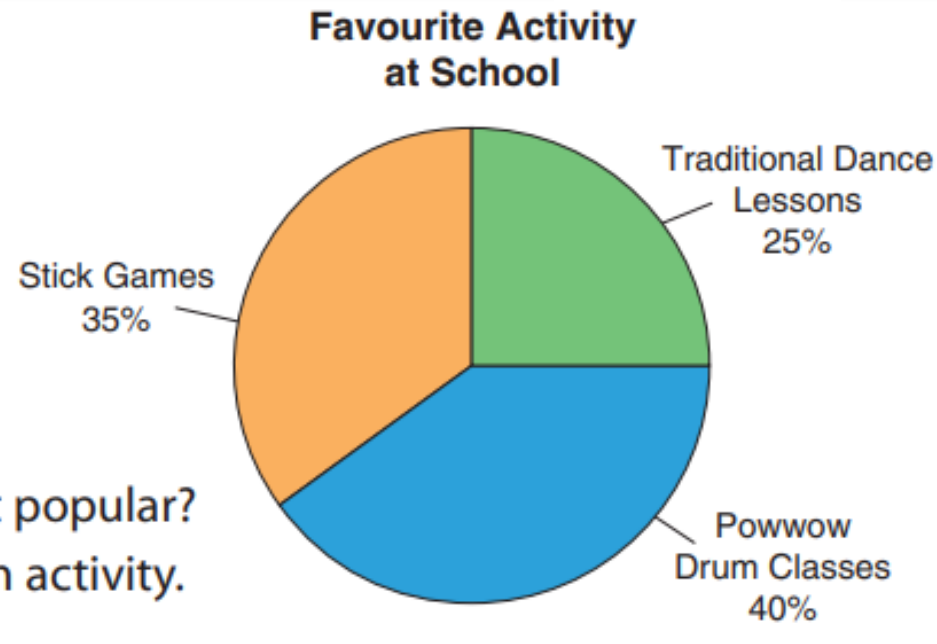
1. This circle graph shows the most popular activities in a First Nations school.
There are 500 students in the school.
All students voted.

a) Which activity did about $\frac{1}{4}$ of the students choose?
How can you tell by looking at the graph?

b) Which activity is the most popular? The least popular?

c) Find the number of students who chose each activity.

d) How can you check your answers to part c?



1a) $\frac{1}{4}$ Dance Lessons

$\frac{1}{4}$ is 25%, or it forms a right angle

b) Most Popular - Drum Classes
Least Popular - Dance Lesson.

c) Dance Lessons
25% of 500
0.25 x 500
125

25% of 100 = 25
25% of 500 =
25 x 5
125

Stick Games
35% of 500
0.35 x 500
175

25% of 500 = 125
10% of 500 = 50
35%
175

Drum Classes
40% of 500
0.4 x 500
200

10% of 500 = 50
40%
= 50 x 4
200

Homework

Solutions

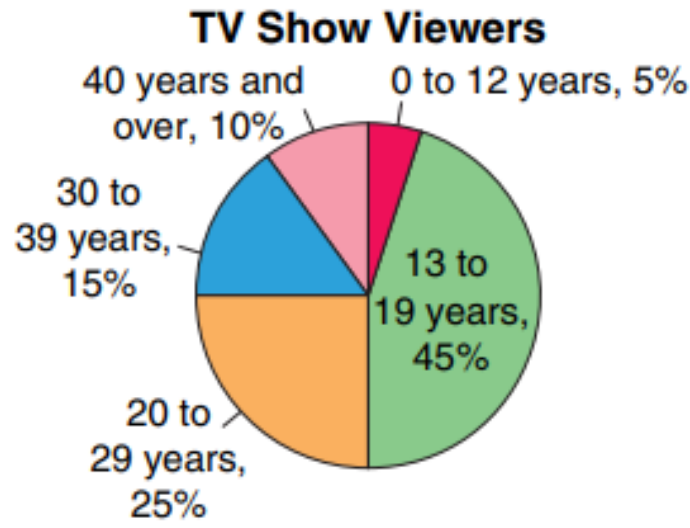
2. This circle graph shows the ages of viewers of a TV show.

One week, approximately 250 000 viewers tuned in.

a) Which two age groups together make up $\frac{1}{2}$ of the viewers?

b) How many viewers were in each age group?

i) 13 to 19 **ii)** 20 to 29 **iii)** 40 and over



Homework

Solutions

2. 2 age groups → $\frac{1}{2}$ of viewers

0-12 years and 13-19 years.

b) i) 13-19 45%

45% of 250 000

0.45 x 250 000

112 500

ii) 20-29 25%

25% of 250 000

0.25 x 250 000

62 500

iii) 40-over 10%

10% of 250 000

25 000

Homework
Solutions

3. This graph shows the world's gold production for a particular year. In this year, the world's gold production was approximately 2300 t. About how much gold would have been produced in each country?

a) Canada **b)** South Africa

3. Canada 7%

7% of 2300

0.07 x 2300

161 t produced by Canada

South Africa 35%

35% of 2300

0.35 x 2300

805 t produced by South Afric-

Homework

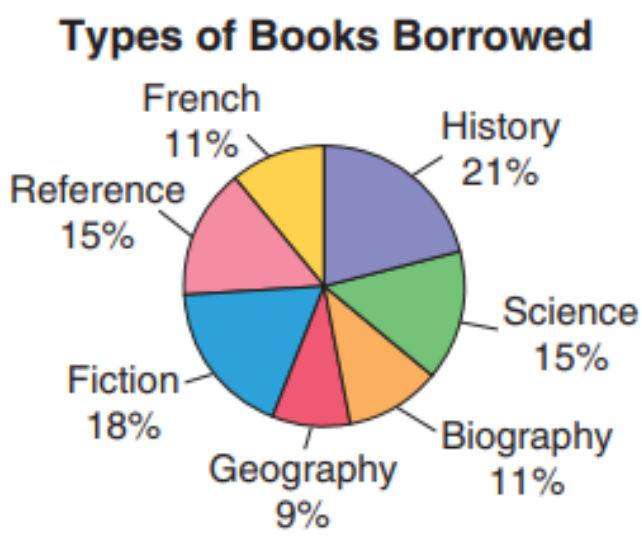
Solutions

4. The school library budget to buy new books is $5000.

The librarian has this circle graph to show the types of books students borrowed in one year.

a) How much money should be spent on each type of book? How do you know?

b) Explain how you can check your answers in part a.



4. History 21% of 5000
0.21 x 5000
1050

Homework

Solutions

Science
0.15 x 5000
= 750

15% of 5000
10% of 5000 = 500
5% of 5000 250
15% 750

Biography
0.11 x 5000
$550

11% of 5000
10% = 500
1% = 50
11% 550

Geography 9% of 5000
(18% - 1%) 500 - 50 = 450

0.09 x 5000
= 450

Fiction 18% of 5000
0.18 x 5000
900

Reference 15% of 5000 = 750

French 11% of 5000 = 550

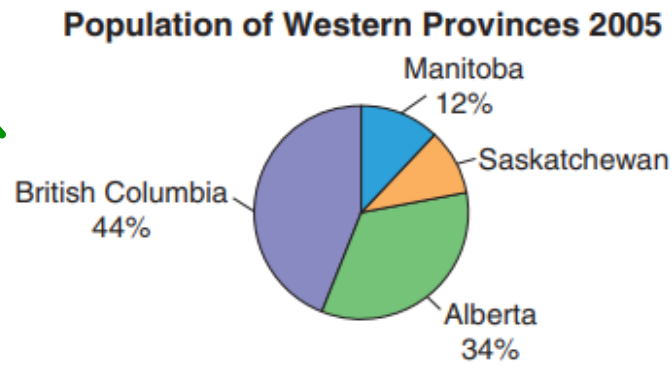
5. **Assessment Focus** This circle graph shows the populations of the 4 Western Canadian provinces in 2005. ← Year Not total
The percent for Saskatchewan is not shown.

a) What percent of the population lived in Saskatchewan? How do you know?

b) List the provinces in order from least to greatest population.
How did the circle graph help you do this?

c) In 2005, the total population of the Western provinces was about 9 683 000 people.
Calculate the population of each province, to the nearest thousand.

d) What else do you know from looking at the circle graph? Write as much as you can.



Homework Solutions

5. $44 + 34 + 12 = 90\%$

Sask $= 100 - 90$
$= 10\%$

They have to add to 100%

b) Least to Greatest → Look at the size of the pieces.

SK
MB
AB
BC

c) SK 10% of 9 683 000
0.10 × 9 683 000
968 300

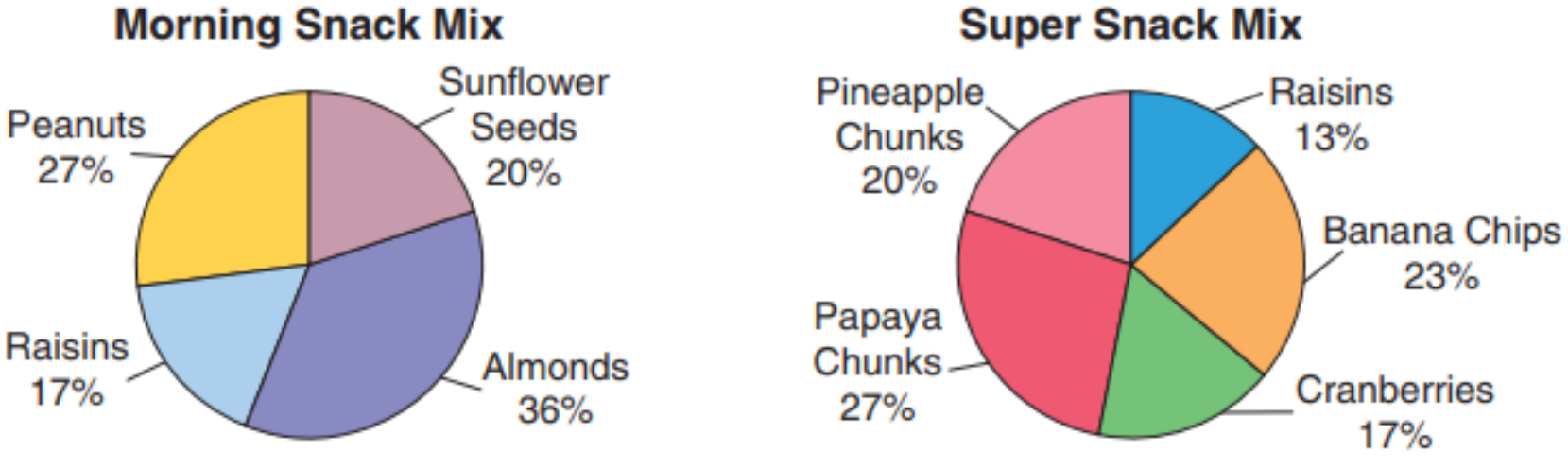
MB 12% of 9 683 000
0.12 × 9 683 000
1 161 960

AB 34% of 9 683 000
0.34 × 9 683 000
3 292 220

BC 44% of 9 683 000
0.44 × 9 683 000
4 260 520

Homework Solutions

7. These circle graphs show the percent of ingredients in two 150-g samples of different snack mixes.



a) For each snack mix, calculate the mass, in grams, of each ingredient.

b) About what mass of raisins would you expect to find in a 300-g sample of each mix? What assumptions did you make?

Homework Solutions

7) Morning Snacks

a)

Peanuts	Sunflower	Almonds	Raisins
27% of 150	20% of 150	36% of 150	17% of 150
10% of 150 = 15	10% of 150 = 15	10% of 150 = 15	10% of 150 = 15
20% of 150 = 30	20% of 150 = 30 g	30% of 150 = 45	
	0.2 x 150 = 30g		
1% of 150 = 1.5		1% of 150 = 1.5	1% of 150 = 1.5
7% of 150 = 10.5		6% of 150 = 9	7% of 150 = 10.5
27% of 150 = 40.5 g		36% of 150 = 44 g	17% of 150 = 25.5 g
0.27 x 150		0.36 x 150	0.17 x 150

Super Snack

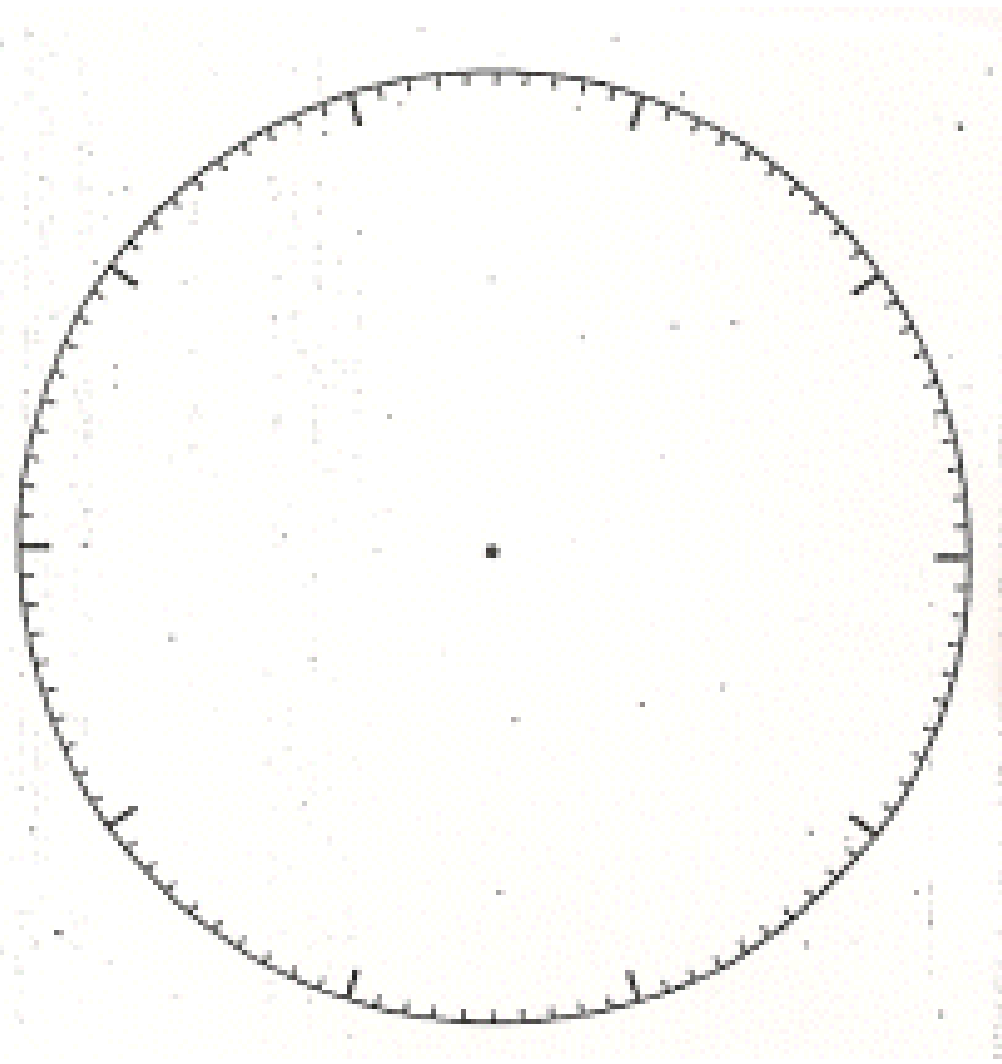
a)

Paypapya	Pineapple	Raisins	Banana	Cranberries
27% of 150	20% of 150	13% of 150	23% of 150	17% of 150
10% of 150 = 15	10% of 150 = 15	10% of 150 = 15	10% of 150 = 15	10% of 150 = 15
20% of 150 = 30	20% of 150 = 30 g		20% of 150 = 30	
	0.20 x 150			
1% of 150 = 1.5		1% of 150 = 1.5	1% of 150 = 1.5	1% of 150 = 1.5
7% of 150 = 10.5		3% of 150 = 4.5	3% of 150 = 4.5	7% of 150 = 10.5
27% of 150 = 40.5 g		13% of 150 = 19.5 g	27% of 150 = 34.5 g	13% of 150 = 25.5 g
0.27 x 150		0.13 x 150	0.27 x 150	0.13 x 150

This is a percent circle. The circle is divided into 100 congruent parts.

You can draw a circle graph on a percent circle.

-each dash represents 1%



Drawing Circle Graphs

Favorite Colors

Out of 25 students, the following colors were their favorites:

Blue - 11, Red - 4, Yellow - 2, Black - 1, Other - 7

Step 1) Write each colour as a fraction of the whole

Step 2) Write each as a percent.

(By writing an equivalent fraction with denominator of 100)

Step 3) Put Percentage Sectors on graph

Include titles

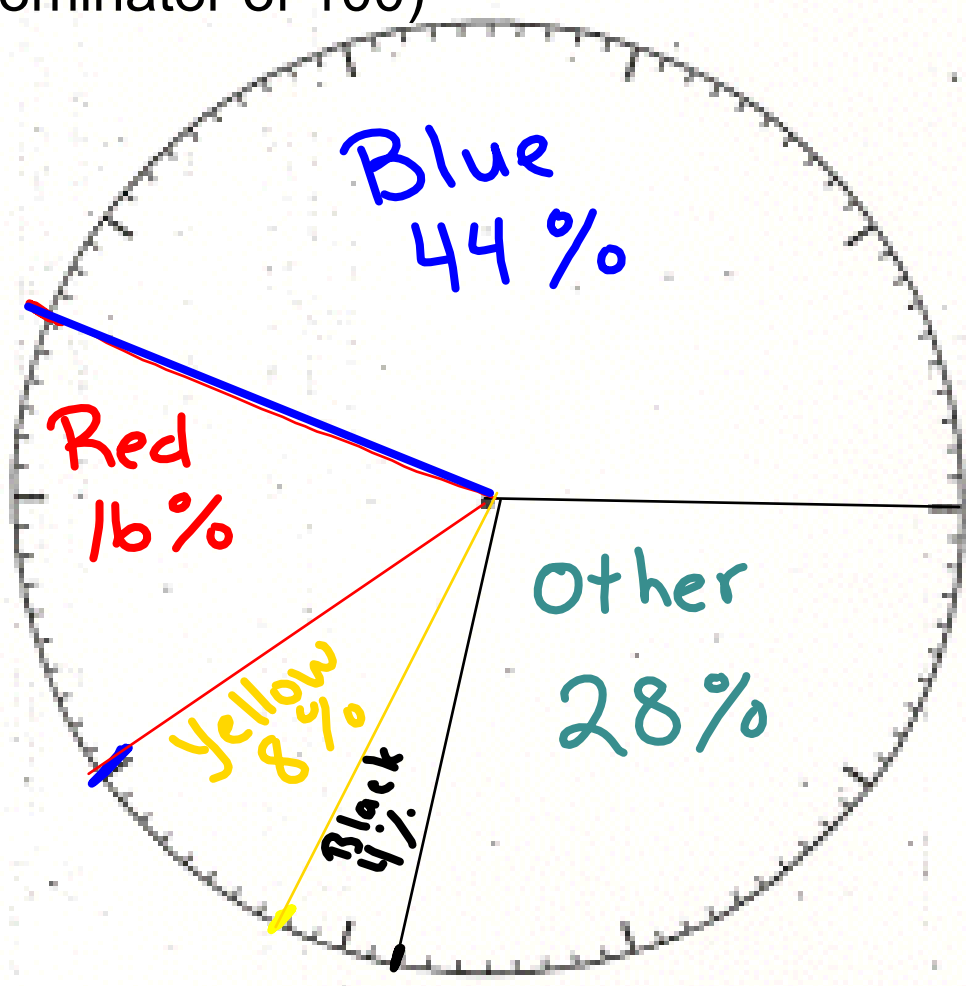
Blue = $\frac{11}{25} \overset{\times 4}{=} \frac{44}{100} = 44\%$

Red $\frac{4}{25} \overset{\times 4}{=} \frac{16}{100} = 16\%$

Yellow $\frac{2}{25} = \frac{8}{100} = 8\%$

Black = $\frac{1}{25} = \frac{4}{100} = 4\%$

Other = $\frac{7}{25} = \frac{28}{100} = 28\%$



Recall

Fractions to Percent

If you cannot write a fraction to an equivalent fraction with Denominator of 100 THEN convert fraction to decimal by taking top ÷ bottom and multiply that decimal by 100 to get the percent.

top ÷bottom = decimal x 100 = %

Ex) $\frac{3}{7}$

3÷ 7 = 0.4285714 on calculator

x 100 = 42.9 %

Rounded to tenths place

Ex 2)

Students in a Grade 7 class were asked how many siblings they have. Here are the results.

0 Siblings	1 Sibling	2 Siblings	More than 2 Siblings
3	13	8	1

Total ⇒ 25

3 + 13 + 8 + 1 = 25

Write each number of students as a fraction of the total number. Then write the fraction as a percent.

Use the percent circle to draw a circle graph to display the data. Write 2 questions you can answer by looking at the graph.

0 Sibs

$\frac{3}{25} = 0.12 = 12\%$

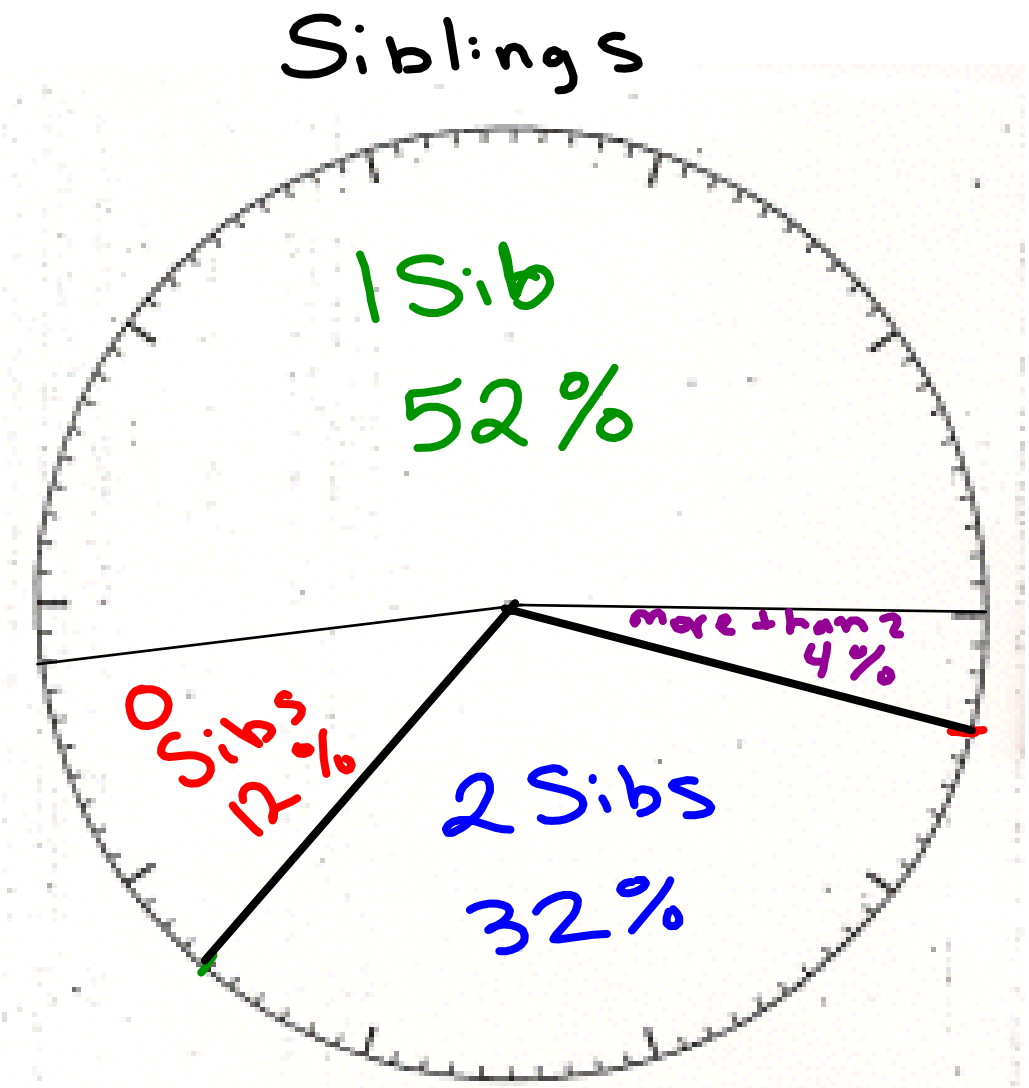
Top ÷ Both ×100

1 Sib

$\frac{13}{25} = 0.52 = 52\%$

2 Sibs

$\frac{8}{25} = 0.32 = 32\%$



More than 2

$\frac{1}{25} = 0.04 = 4\%$

Ex 3)

Drawing Circle Graphs

Favorite Music

Out of 40 students, the following were their favorites:

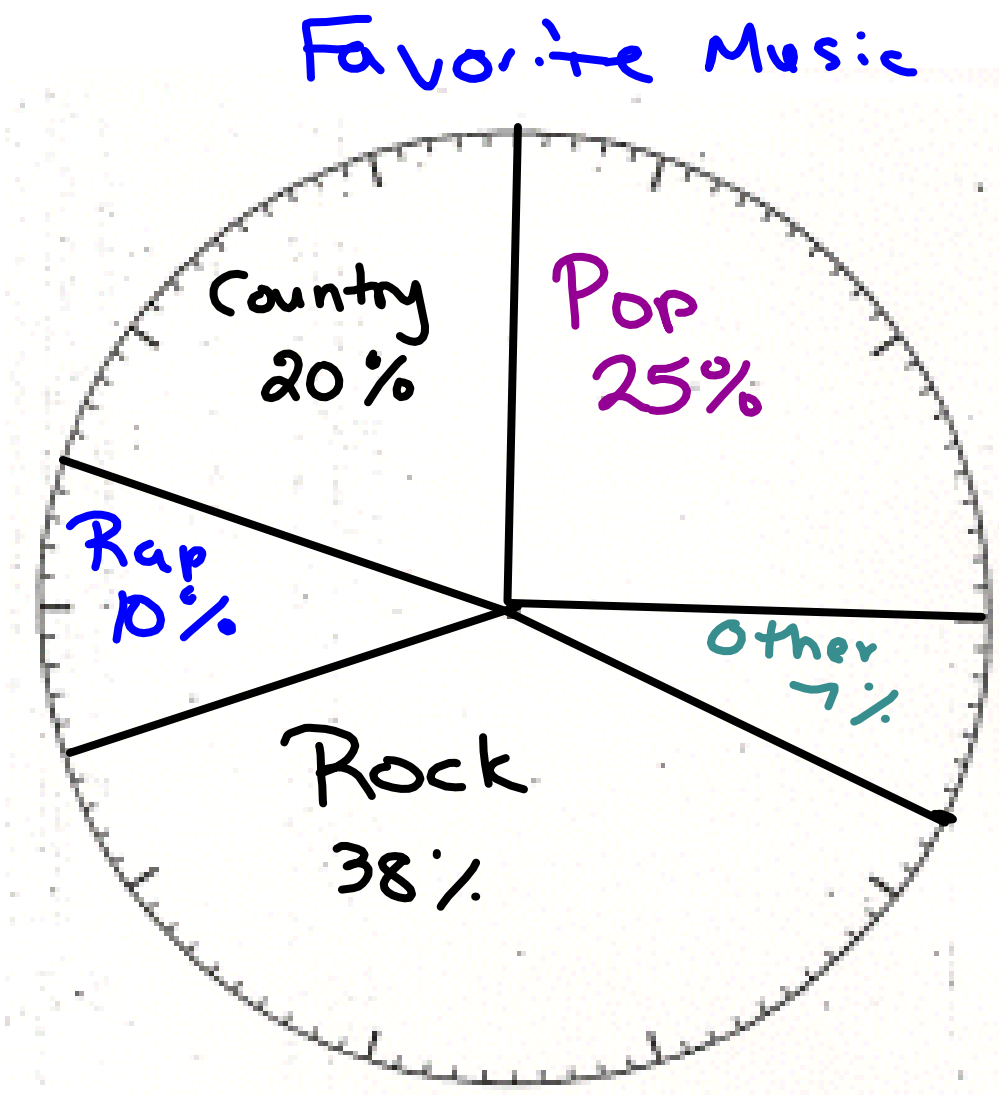
Rock 15 $\frac{15}{40} = 0.375 = 37.5\%$

Country 8 $\frac{8}{40} = 0.2 = 20\%$

Rap 4 $\frac{4}{40} = 0.1 = 10\%$

Pop 10 $\frac{10}{40} = 0.25 = 25\%$

Other 3 $\frac{3}{40} = 0.075 = 7.5\%$



Class/Homework

WS 160 / 163 # 6, #1, #2

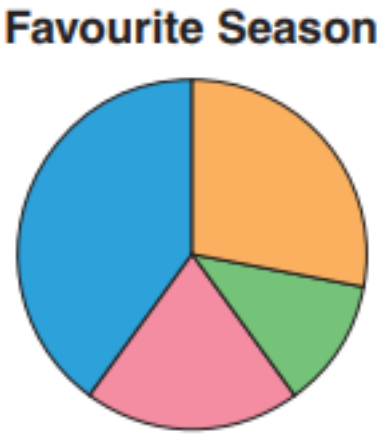
Attached on next slides

Ws 160 / 163

6. Gaston collected data about the favourite season of his classmates.

Classmates' Favourite Season

Season	Autumn	Winter	Spring	Summer
Number of Students	7	3	5	10



He recorded the results in a circle graph.

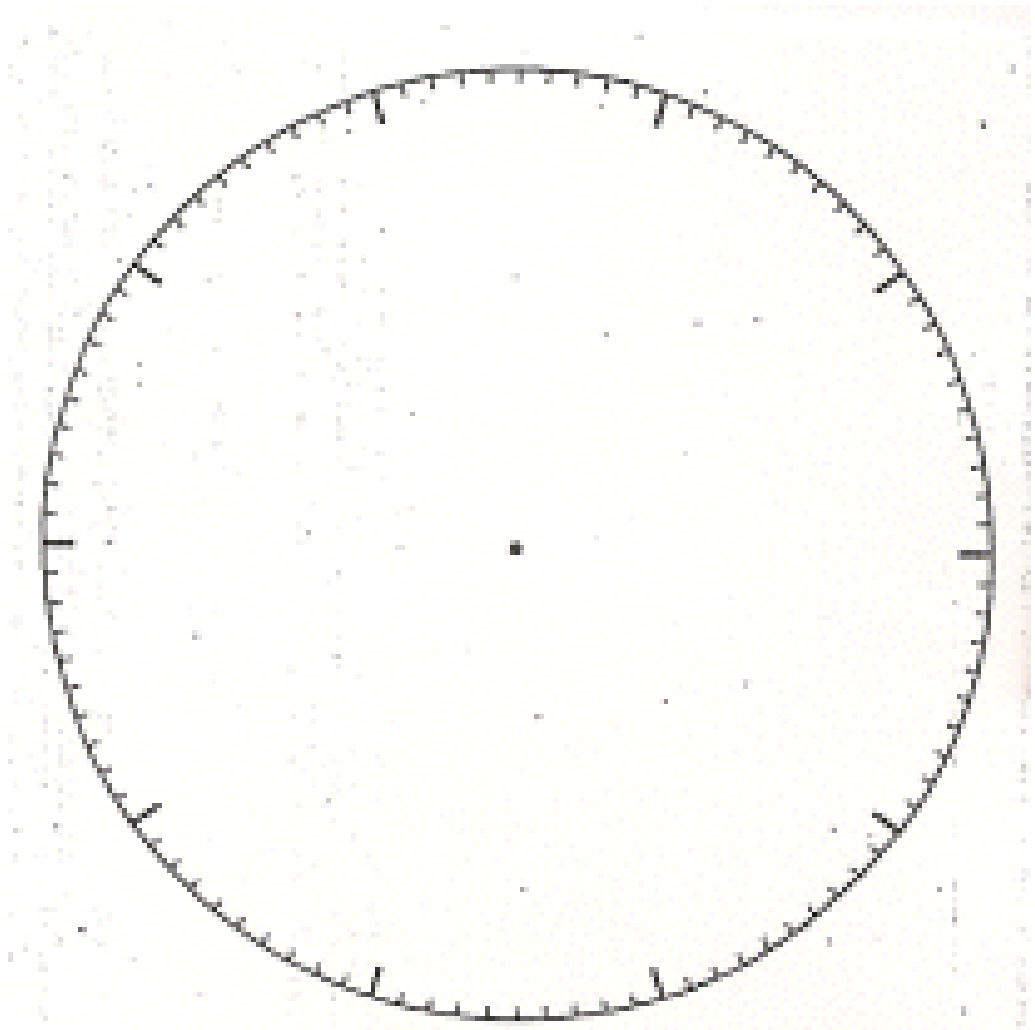
The graph is not complete.

a) How many students were surveyed?

b) Write the number of students who chose each season as a fraction of the total number of students, then as a percent.

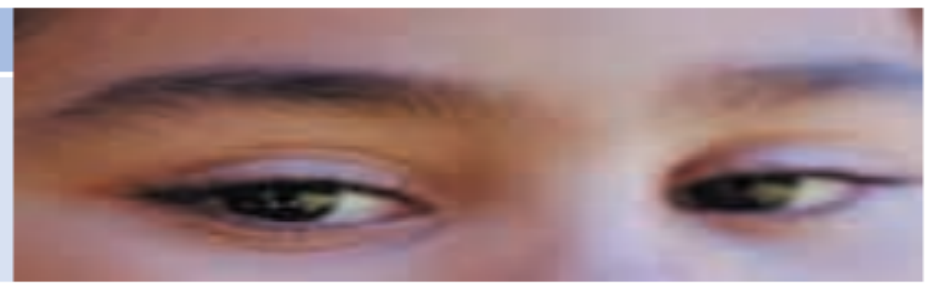
c) Explain how you can check your answers to part b.

d) Sketch the graph. Label each sector with its name and percent. How did you do this?



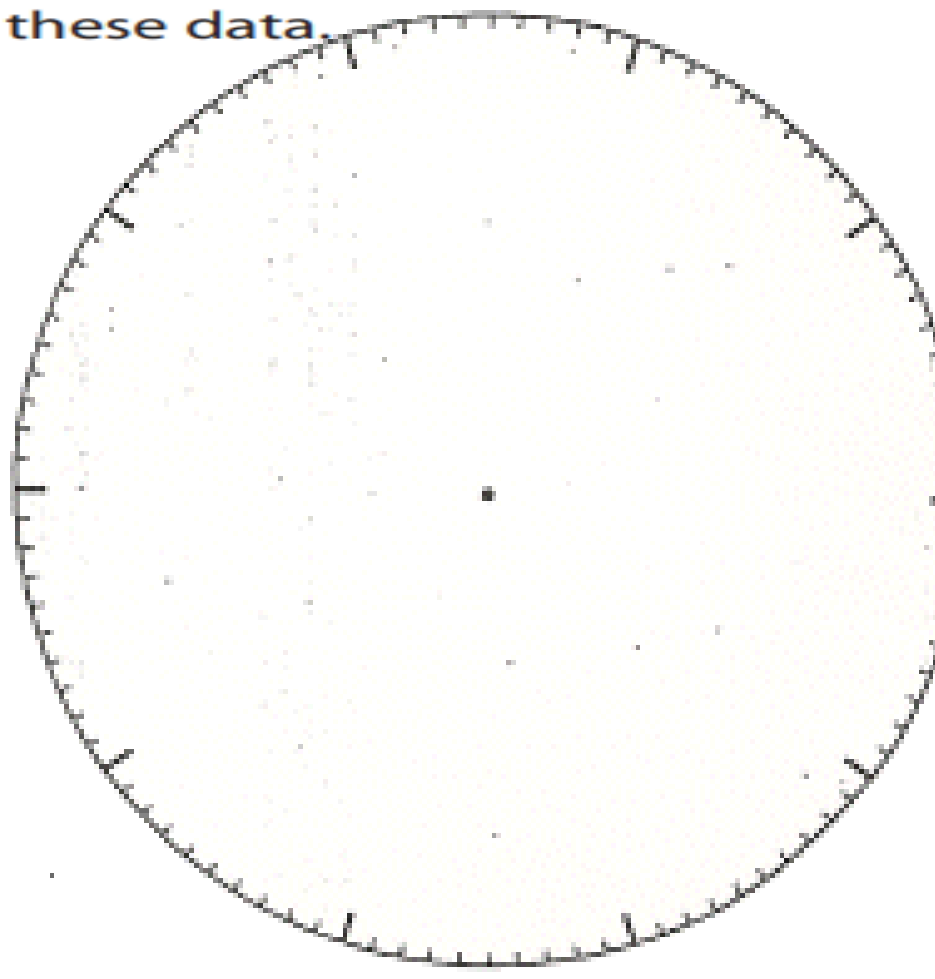
1. The table shows the number of Grade 7 students with each eye colour at Northern Public School.

Eye Colour	Number of Students
Blue	12
Brown	24
Green	8
Grey	6



a) Find the total number of students.
b) Write the number of students with each eye colour as a fraction of the total number of students.
c) Write each fraction as a percent.
d) Draw a circle graph to represent these data.

Use hundred circle for tonight



2. In a telephone survey, 400 people voted for their favourite radio station.

a) How many people chose EASY2?

b) Write the number of people who voted for each station as a fraction of the total number who voted. Then write each fraction as a percent.

c) Draw a circle graph to display the results of the survey.

Radio Station	Votes
MAJIC99	88
EASY2	?
ROCK1	120
HITS2	100

Use hundred circle for tonight