Warm Up Grade 8

Date:

Use Mental Math

1) 35% of 2000

2) 15% of 440

Warm Up Grade 8

Date:

Use Mental Math

1) 35% of 2000

10% of 2000 = 200

x3 x3

30% of 2000 = 600

÷2 ÷2

5% of 2000 = 100

35% of 2000 = 700

2) 15% of 440

÷2 (10% of 440 = 44 ÷2

5% of 440 = 22 +

15% of 440 = 66

WS 164 #1 HW solutions

1. (a) $12 + 24 + 8 + 6 = 50$

(b) Blue: $\frac{12}{50} = \frac{24}{100} = 0.24 = 24\%$

(c) Brown: $\frac{24}{50} = \frac{48}{100} = 0.48 = 48\%$

Green: $\frac{8}{50} = \frac{16}{100} = 0.16 = 16\%$

Grey: $\frac{6}{50} = \frac{12}{100} = 0.12 = 12\%$

Check: 24% + 48% + 16% + 12% = 100%

$0.48 \times 360 = 172.8^\circ \approx 173^\circ$

24% of 360° =

10% of 360° = 36

20% of 360° = 72°

1% of 360° = 3.6

4% of 360° = 14.4°

24% of 360° = 86.4°

$0.24 \times 360 \approx 87^\circ$

48% is double 24 so degree is doubled

86.4 x 2 = 172.8°

12% of 360° =

10% of 360° = 36

1% of 360° = 3.6

2% of 360° = 7.2°

12% of 360° = 43.2°

$0.12 \times 360^\circ = 43.2^\circ \approx 43^\circ$

16% of 360° =

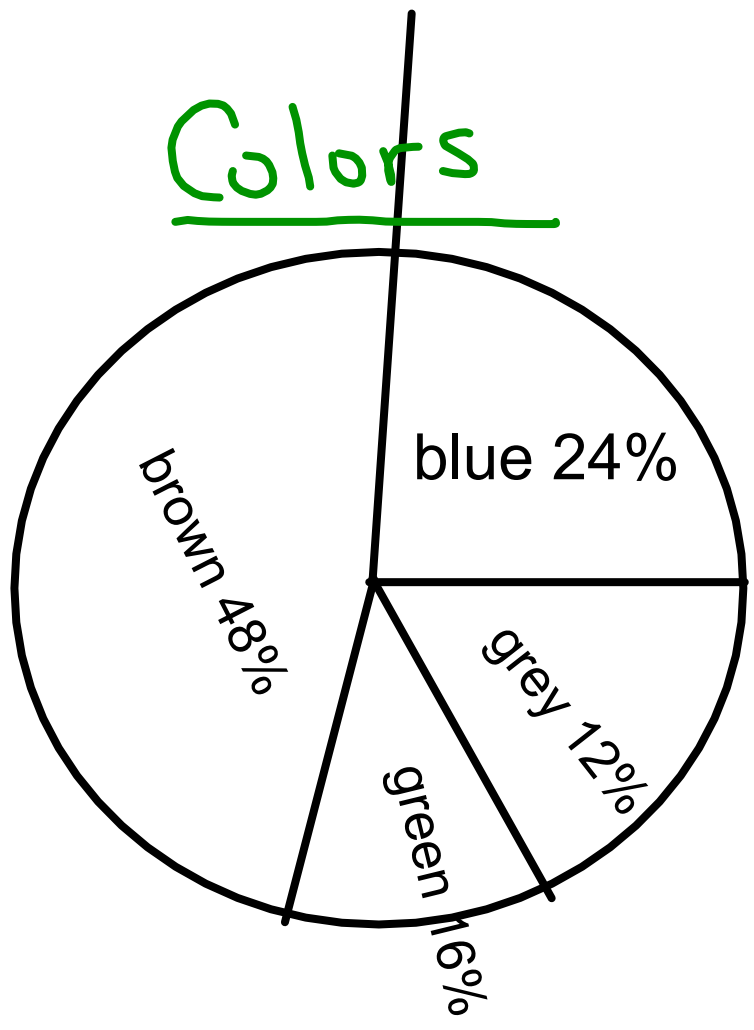
10% of 360° = 36

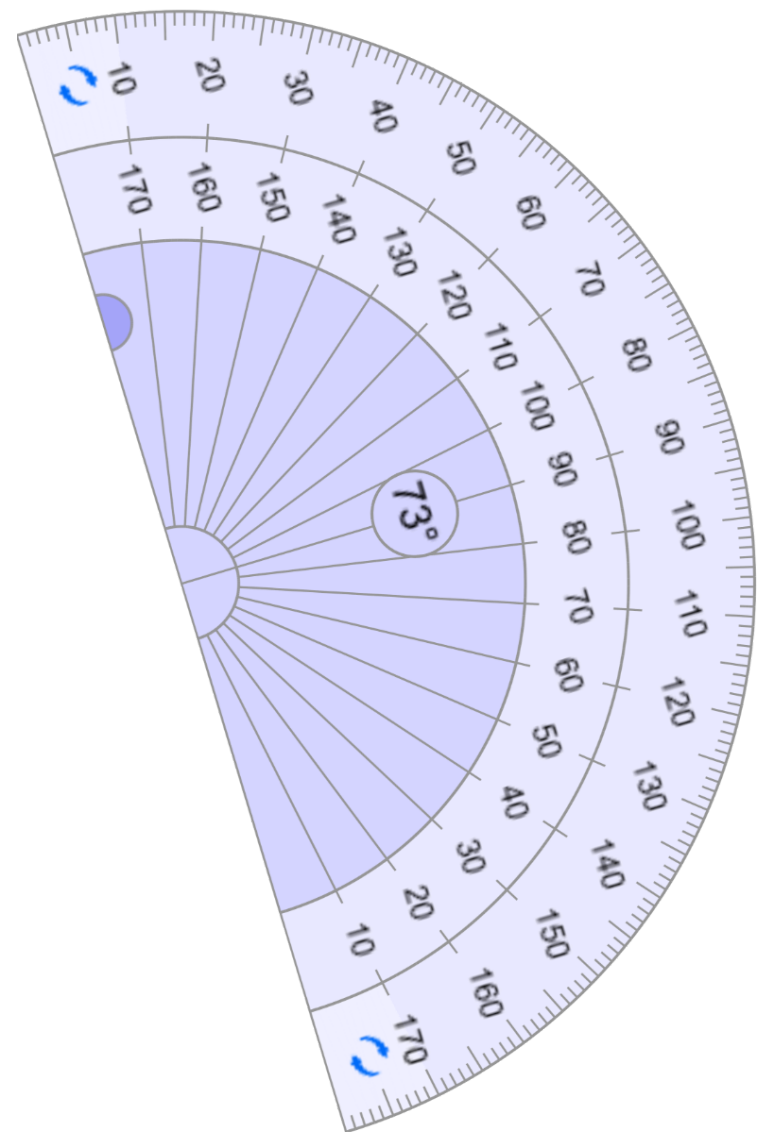
1% of 360° = 3.6

6% of 360° = 21.6°

16% of 360° = 57.6°

$0.16 \times 360^\circ = 57.6^\circ \approx 58^\circ$





WS 164 #2 HW solutions

2. (a) $400 - 88 - 120 - 100 = 92$ Ninety two people chose EASY2.

(b) MAJIC99: $\frac{88}{400} = 0.22 = 22\%$

EASY 2: $\frac{92}{400} = 0.23 = 23\%$

ROCK 1: $\frac{120}{400} = 0.3 = 30\%$

HITS 2: $\frac{100}{400} = 0.25 = 25\%$

Check: 22%
23%
30%
+ 25%
100%

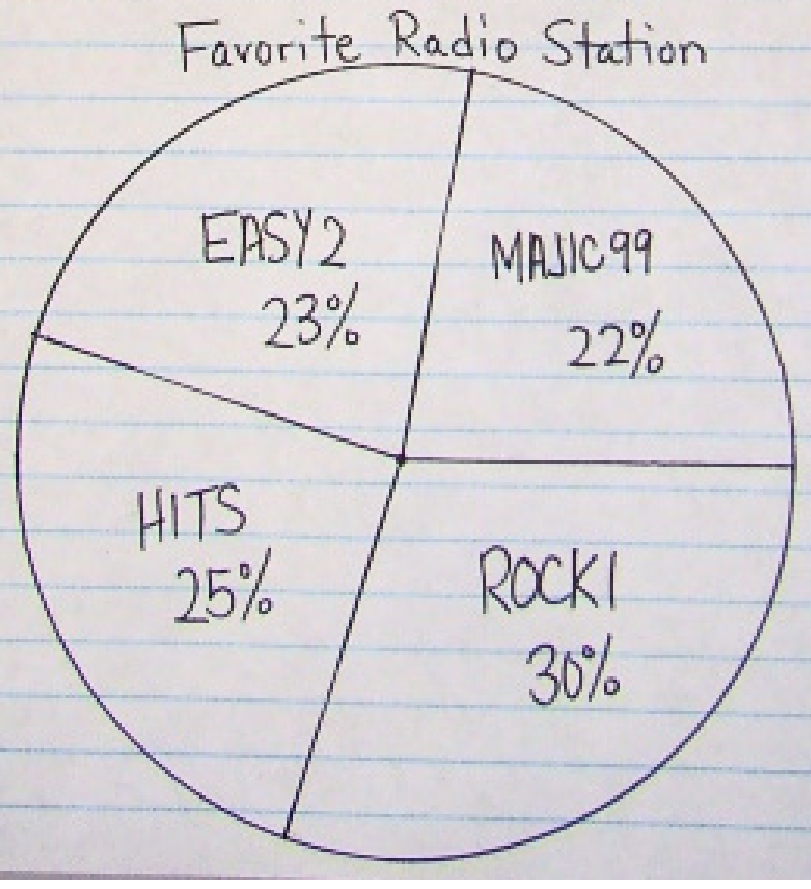
(c) 22% of 360°
$0.22 \times 360° = 79°$

23% of 360°
$0.23 \times 360° = 83°$

30% of 360°
$0.3 \times 360° = 108°$

25% of 360°
$0.25 \times 360° = 90°$

Check: 79°
83°
108°
+ 90°
360°



Hilroy

#3

3. Assessment Focus This table shows the method of transport used by U.S. residents entering Canada in one year.

a) How many U.S. residents visited Canada that year?

b) What fraction of U.S. residents entered Canada by boat?

c) What percent of U.S. residents entered Canada by plane?

d) Display the data in a circle graph.

United States Residents Entering Canada

Method of Transport	Number
Automobile	32 000 000
Plane	4 000 000
Train	400 000
Bus	1 600 000
Boat	1 200 000
Other	800 000

3.(a) 32 000 000 + 4 000 000 + 400 000 + 1 600 000 + 1 200 000 + 800 000 = 40 000 000 US residents

(b) $\frac{1\,200\,000}{40\,000\,000} = \frac{12}{400} = \frac{3}{100}$ = 3%

(c) $\frac{4\,000\,000}{40\,000\,000} = \frac{4}{40} = \frac{1}{10} = 0.1 = 10\%$

(d) Automobile: $\frac{32\,000\,000}{40\,000\,000} = \frac{32}{40} = 0.8 = 80\%$

$0.8 \times 360^\circ = 288^\circ$

Plane: 10% $0.1 \times 360^\circ = 36^\circ$

Train: $\frac{400\,000}{40\,000\,000} = \frac{4}{400} = 0.01 = 1\%$

$0.01 \times 360^\circ = 4^\circ$

Bus: $\frac{1\,600\,000}{40\,000\,000} = \frac{16}{400} = 0.04 = 4\%$

$0.04 \times 360^\circ = 14^\circ$

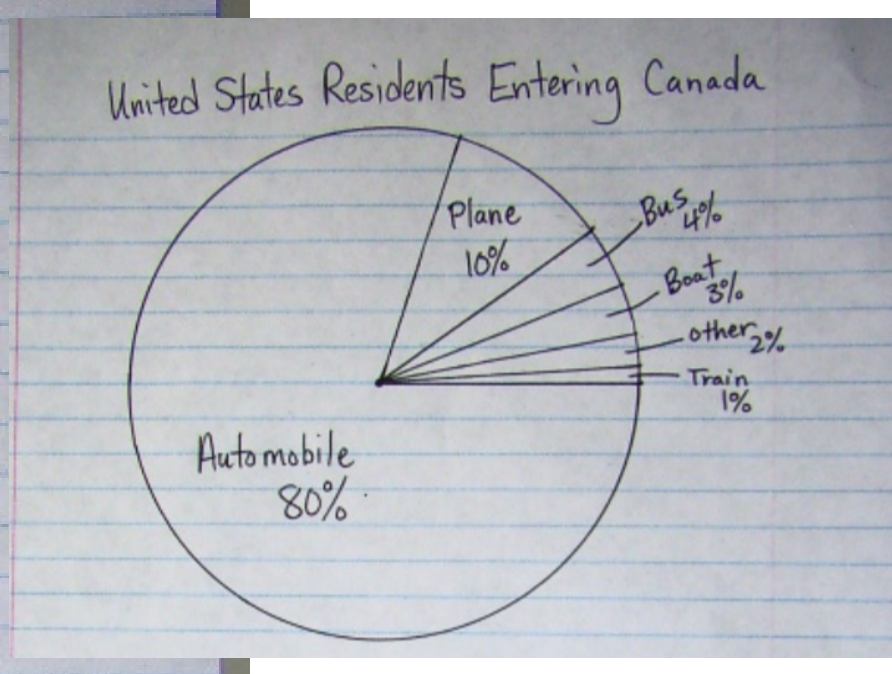
Boat: $\frac{3}{100} = 0.03 = 3\%$

$0.03 \times 360^\circ = 11^\circ$

Other: $\frac{800\,000}{40\,000\,000} = \frac{8}{400} = 0.02 = 2\%$

$0.02 \times 360^\circ = 7^\circ$

Check: $288^\circ + 36^\circ + 4^\circ + 14^\circ + 11^\circ + 7^\circ = 360^\circ$



HW solutions WS164

4. Can the data in each table below be displayed in a circle graph? Explain.

a)

Educational Attainment of Canadians	
0 to 8 years of elementary school	10%
Some secondary school	17%
Graduated from high school	20%
Some post-secondary education	9%
Post-secondary certificate or diploma	28%
University degree	16%

b)

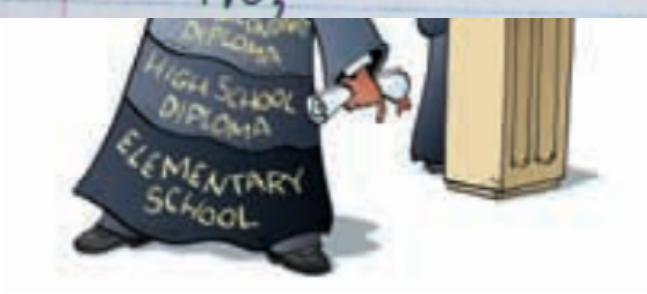
Canadian Households with These Conveniences	
Automobile	64%
Cell phone	42%
Dishwasher	51%
Internet	42%

4. (a) 10% + 17% + 20% + 9% + 28% + 16% = 100%

Yes,

(b) 64% + 42% + 51% + 42% = 199%

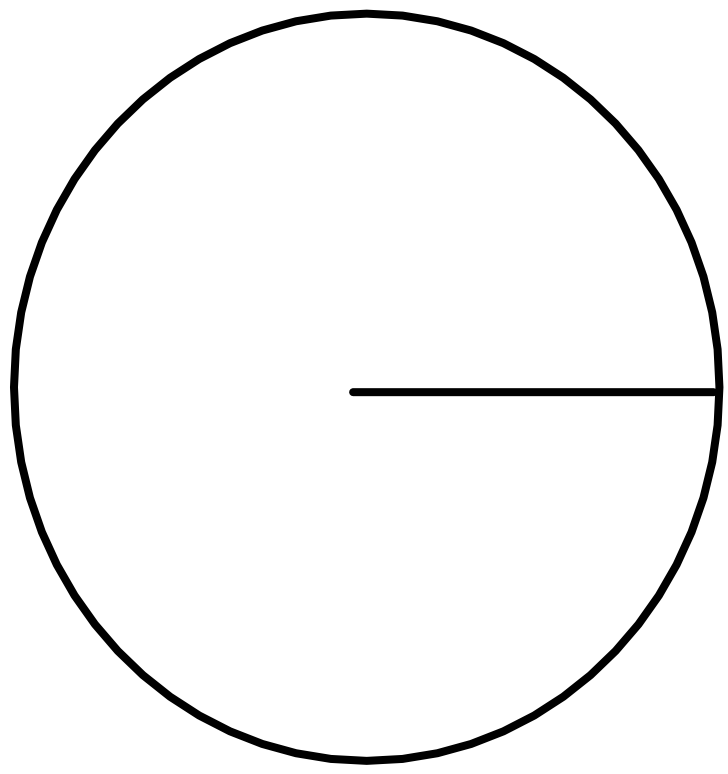
No,



From last day (On back of Sheet)

A group of adults were asked this question:
"How do you regularly watch entertainment?"
Here is what the adults said.

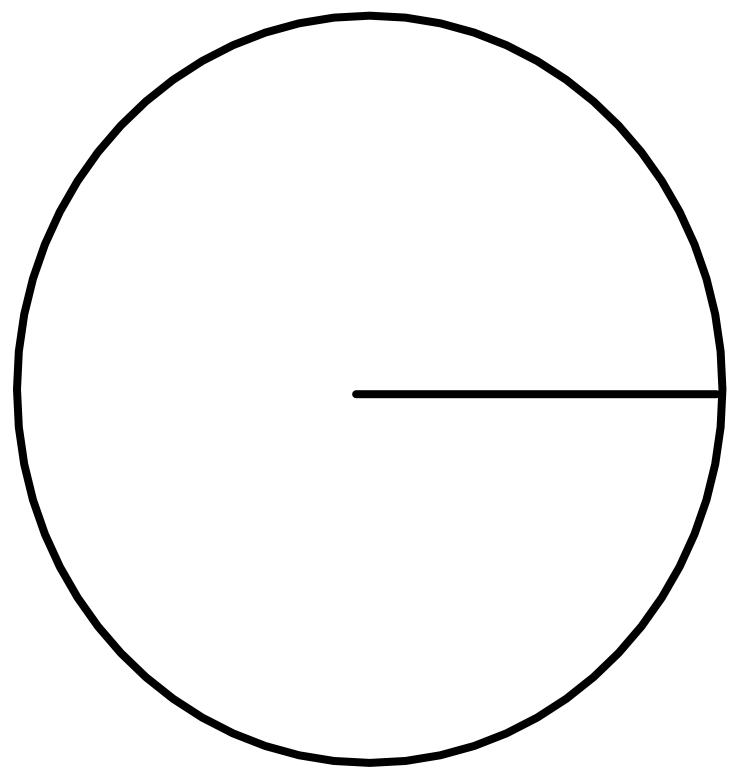
Category	Number of adults
Cable	4
Netflix	12
Youtube	18
Prime	4
Crave	2



From last day (On back of Sheet)

A group of adults were asked this question:
"How do you regularly watch entertainment?"
Here is what the adults said.

Category	Number of adults
Cable	4
Netflix	12
Youtube	18
Prime	4
Crave	2
	+
	40 Total



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

Sector Ang = 10% of 360°
$0.10 \times 360°$
$= 36°$

Netflix $\frac{12}{40} = 0.3 = 30\%$

Sector = 30% of 360°
$0.3 \times 360°$
$108°$

YouTube $\frac{18}{40} = 0.45 = 45\%$

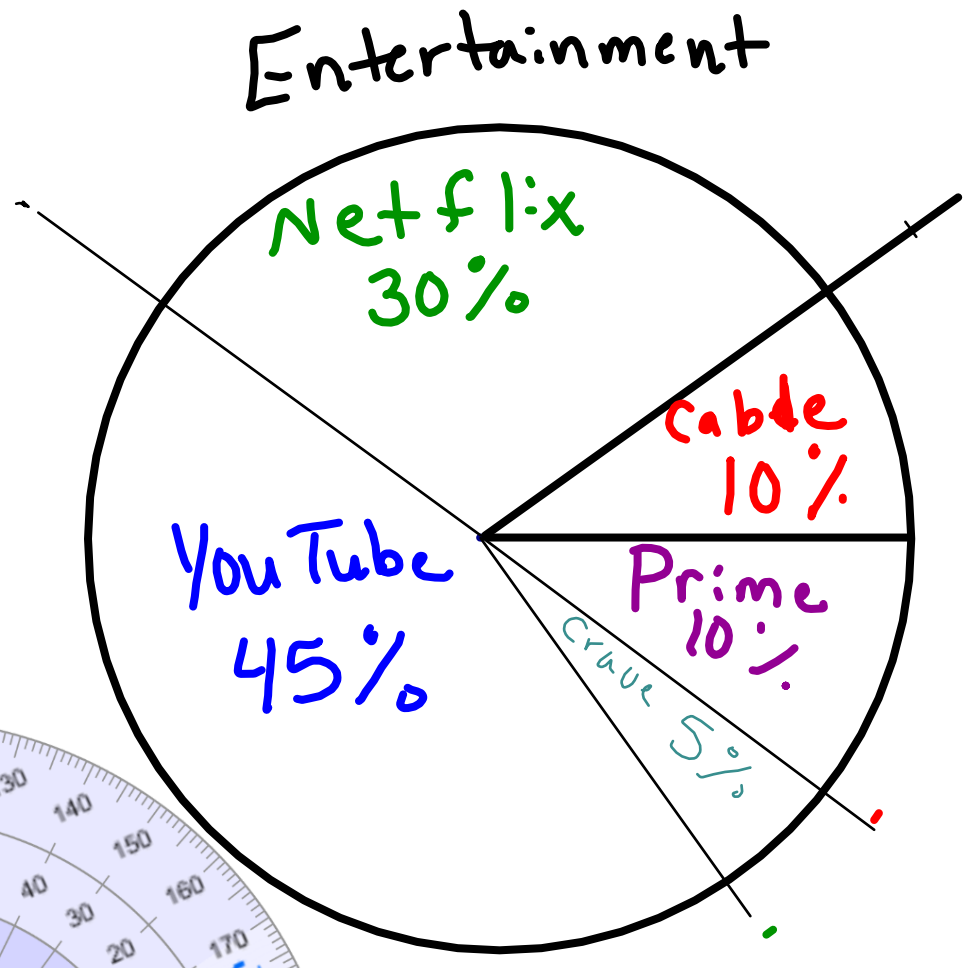
Sector ang = 45% of 360°
$= 0.45 \times 360°$
$= 162°$

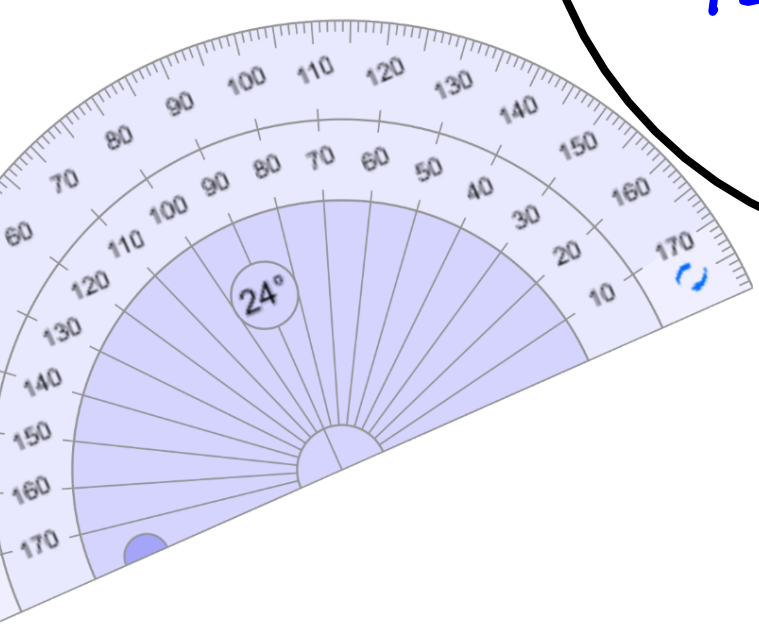
Prime $\frac{4}{40} = 10\%$

Sector = $36°$

Crave $\frac{2}{40} = 0.05 = 5\%$

Sector = 5% of 360°
$0.05 \times 360°$
$= 18°$





Worksheets next page

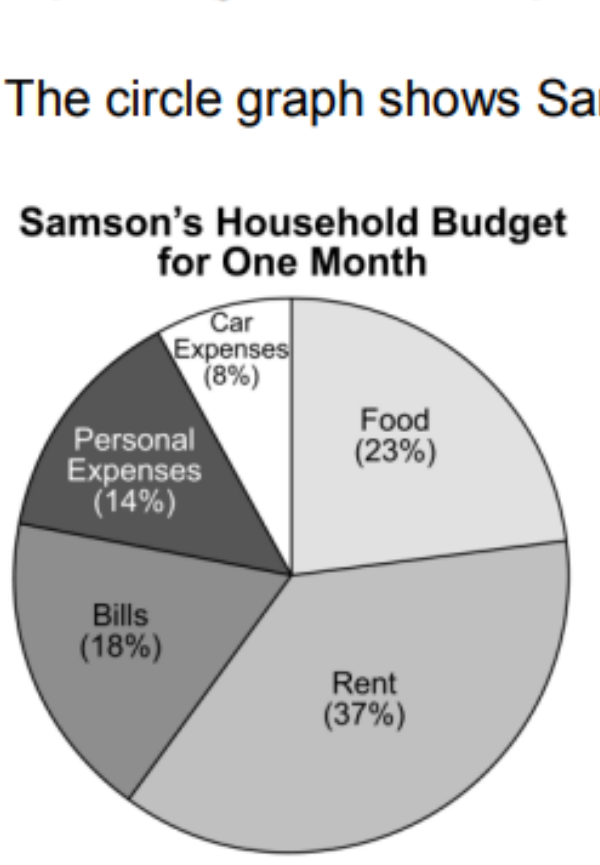
#1, 2, 3, 4

Quiz/Test on Jan 17

Worksheet

Interpreting Circle Graphs

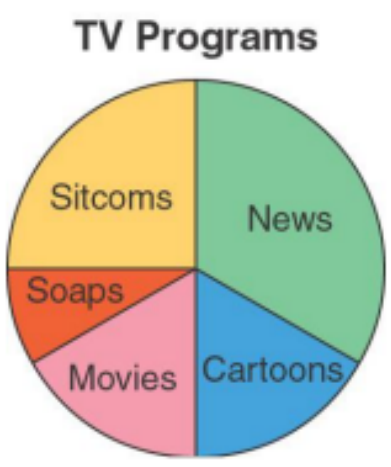
1. The circle graph shows Samson's household budget for a month.



a) Samson takes home $2500 per month. How much does he budget for each item?

b) Samson gets a raise of $500 per month. How will this affect his food budget?

2. This circle graph shows how much time is spent in one day watching different types of TV programs.



a) Which type of program is watched for the greatest amount of time?

b) Which two types of programs are watched for approximately the same amount of time?

c) Estimate the fraction of time spent watching sitcoms.

d) Suppose TV is watched for 1000 days.

Estimate how much time is spent watching sitcoms.

3.) The human body is made up of 20% fat, 18% bone, 50% muscle, and 12% other.

a) Anica's mass is 69 kg. Determine the mass of each part of Anica's body.
i) fat **ii)** bone **iii)** muscle **iv)** other

b) Display the data on a circle graph.

c) What is easily seen on the graph that is not obvious from the data? Explain.

4) To help reduce the cost of the Grade 8 camp weekend, the following amount of money was donated by each group: parents $525, teachers $230, local businesses $340. Students also held a cake auction, which raised $720.

a) How much money was collected?

b) What fraction of the donations was given by local businesses?

c) What percent of the money was raised at the cake auction?

d) Display the data on a circle graph.

5)

a) Which data set could be represented by a circle graph? Explain.
b) Which data sets could not be represented by a circle graph? Explain.

i) **Colours of Cars in the Mall Parking Lot**

Colour	Silver	Blue	Black	Green	Beige	Red	Other
Number	15	8	13	5	11	2	4

ii) **Daily Average High and Low Temperatures for a City**

Month	**Jan.**	**Feb.**	**Mar.**	**Apr.**	**May**	**June**
High Temperature (°C)	–7	–4	5	9	14	20
Low Temperature (°C)	–12	–8	2	4	11	15

iii)

Favourite Animal	**Number of Grade 1 Students**	**Number of Grade 7 Students**
Koala Bear	8	15
Horse	9	4
Kangaroo	11	10
Zebra	4	3
Giraffe	5	9
Monkey	9	12
Rabbit	14	7