

Final Exam Unit 4 Review

1. A circle has diameter 10.5 cm. Calculate the circumference.

$$C = \pi \times d$$

$$C = 3.14 \times 10.5 \text{ m}$$

$$C = 32.97 \text{ m}$$

2. A circle has radius 4.3 mm. Calculate the circumference.

$$C = 2\pi r$$

$$C = 2 \times 3.14 \times 4.3 \text{ m}$$

$$C = 27.0 \text{ m}$$

3. A circle has circumference 12.6 m. Calculate the diameter.

$$d = \frac{C}{\pi} \text{ or } d = C \div \pi$$

$$d = \frac{12.6 \text{ m}}{3.14}$$

$$d = 4.013 \text{ m}$$

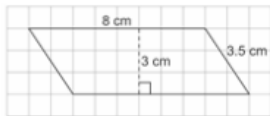
4. A circular tablecloth has diameter 1.8 m. A fringe costs \$2.49/m. Find the cost to put a fringe around the cloth. Do not include tax.

find the circumference !!

(A) $C = \pi \times d$
 $C = 3.14 \times 1.8 \text{ m}$
 $C = 5.652 \text{ m}$

(B) $5.652 \times 2.49/\text{m}$
 $= \$14.07$

5. Calculate the area of each figure.



$$A_{\text{trapezoid}} = b \times h$$

$$A = 8 \text{ cm} \times 3 \text{ cm}$$

$$A = 24 \text{ cm}^2$$



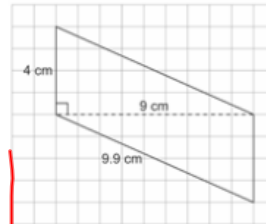
$$d = 41 \text{ cm}$$

$$r = \frac{41}{2} = 20.5 \text{ cm}$$

$$A = \pi r \times r$$

$$A = 3.14 \times 20.5 \times 20.5$$

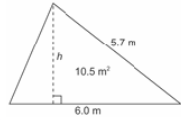
$$A = 1319.59 \text{ cm}^2$$



$$A = b \times h$$

$$A = 4 \times 9$$

$$A = 36 \text{ cm}^2$$

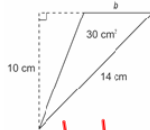


$$A_{\Delta} = \frac{b \times h}{2}$$

$$10.5 = \frac{6.0 \text{ cm} \times h}{2}$$

$$10.5 = 6.0 \times 3.5$$

$$h = 3.5 \text{ m}$$



$$A = \frac{b \times h}{2}$$

$$30 \text{ cm}^2 = \frac{b \times 10}{2}$$

$$30 = \frac{b \times 10}{2}$$

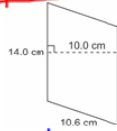
$$b = 6 \text{ cm}$$



$$A = \pi \times r \times r$$

$$A = 3.14 \times 13 \times 13$$

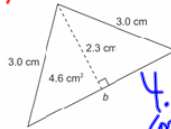
$$A = 530.66 \text{ cm}^2$$



$$A = b \times h$$

$$A = 14 \times 10$$

$$A = 140 \text{ cm}^2$$



$$A = \frac{b \times h}{2}$$

$$4.6 = \frac{b \times 2.3 \text{ cm}}{2}$$

$$4.6 = \frac{4 \times 2.3 \text{ cm}}{2}$$

$$b = 4 \text{ cm}$$

$$A = 100 \text{ cm}^2$$

6. The base of a parallelogram is 25 m. What is the height of the parallelogram?

$$A = b \times h$$

$$100 \text{ cm}^2 = 25 \times h$$

$$h = 4 \text{ m}$$

7. A circular duck pond has a 3 m wide walkway around the perimeter. The circumference (including the walkway) is 50.24 m. What is the area of the duck pond without the walkway?



① find the diameter. ② find the area:

$$d = \frac{c}{\pi}$$

$$d = \frac{50.24}{3.14}$$

$$d = 16 \text{ cm}$$

$$r = \frac{d}{2}$$

$$r = \frac{16}{2} \quad r = 8 \text{ cm}$$

$$r = 8 \text{ cm} - 3 \text{ cm} = 5 \text{ cm}$$

$$A = \pi \times r \times r$$

$$A = 3.14 \times 5 \times 5$$

$$A = 78.5 \text{ m}^2$$

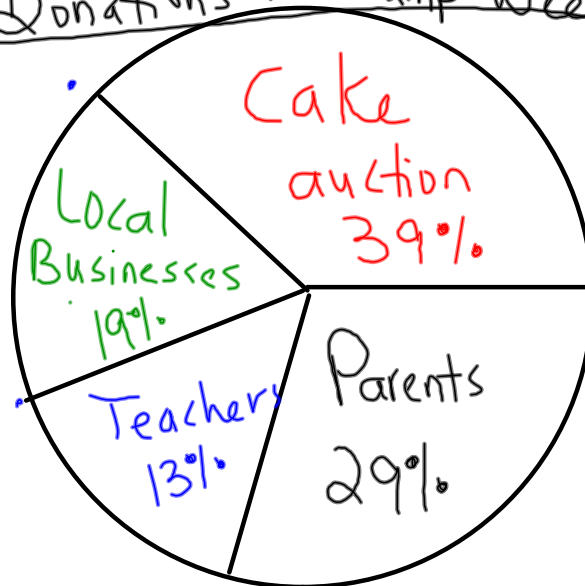
The area of the duck pond is 78.5 m^2

8. To help reduce the cost of the Grade 7 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.

- How much money was collected?
- What fraction was given by local businesses?
- What % was raised at the cake auction?
- Display the data on a circle graph.

\$ donated by:	frequency	Fraction	Percent	Central angle
Parents	\$525.	$\frac{525}{1815}$	$28.9\% = 29\%$	$0.29 \times 360^\circ = 104^\circ$
Teachers	\$230.	$\frac{230}{1815}$	$12.6\% = 13\%$	$0.13 \times 360^\circ = 46.8 = 47^\circ$
Local businesses	\$340.	$\frac{340}{1815}$	$18.7\% = 19\%$	$0.19 \times 360 = 68^\circ$
cake auction	\$720.	$\frac{720}{1815}$	$39.6\% = 39\%$	$0.39 \times 360 = 140.4 = 141^\circ$
Total: \$1815.			100%	360

Donations for Camp Weekend



9. Which data sets cannot 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

Data Set # ii. Given the data you cannot find the totals with 2 sets of data.