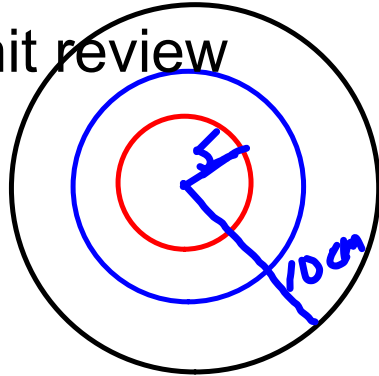


2. Homework Solutions to Page 138
mid unit review



$d = 2r$

Blue circle
could have a
radius of:
6, 8.5, 7, 7.5,
9,

So the diameters would be,
12, 17, 14, 15, 18, respectively

3. Diameter

Radius $r = d/2$

a)

7.8 cm

$\frac{7.8}{2} = 3.9$

b)

8.2 cm

$\frac{8.2}{2} = 4.1$

c)

10 cm

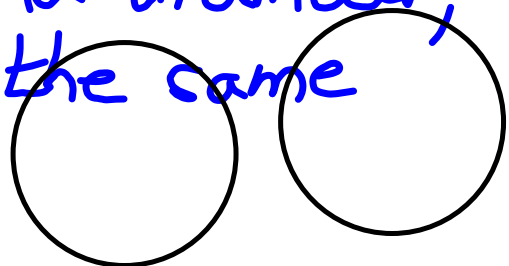
$10/2 = 5$

d)

25 cm

$\frac{25}{2} = 12.5 \text{ cm}$

4. You can draw 2 circles with
the same radius and diameter,
but they will be the same
size or congruent.



5 a) $r = 6$

b) $d = 16$

$d = 12$
 $C_{ir} = \pi d$
 $= 3.14 \times 12$
 $= 37.68 \text{ cm}$

$\approx 3 \times 12$
 36

OR $C = 2\pi r$
 $= 2 \times 3.14 \times 6 \text{ cm}$
 $= 37.68 \text{ cm}^2$

$C_{ir} = \pi d$
 $= 3.14 \times 16$
 $= 50.24 \text{ cm}$

$\approx 3 \times 16$
 48

6a) wheel - $d = 66 \text{ cm}$

$C_{ir} = \pi d$
 $= 3.14 \times 66$
 $= 207.24 \text{ cm}$

b) Tire radius. 37 cm

$C = 2\pi r$
 $= 2 \times 3.14 \times 37 \text{ cm}$
 $= 232.36 \text{ cm}^2$

OR $C_{ir} = \pi d$
 $d = 74$
 $= 3.14 \times 74$
 $= 232.36 \text{ cm}$

c) Hula Hoop $d = 60 \text{ cm}$

$C_{ir} = \pi d$
 3.14×60
 $= 188.4 \text{ cm}$

$$7. C_{\text{ir}} = 76.6 \text{ m}$$

$$C_{\text{ir}} = \pi d$$

$$76.6 = 3.14 \times d$$

$$\frac{76.6}{3.14} = d$$

$$24.39 \text{ m}$$

$$8. C_{\text{ir}} = \pi d$$

$$a) 256 = 3.14 \times d$$

$$\frac{256}{3.14} = d$$

$$81.53 = d$$

$$r = \frac{81.53}{2}$$

$$= 40.8 \text{ cm}$$

$$b) C_{\text{ir}} = \pi d$$

$$113 = 3.14 \times d$$

$$\frac{113}{3.14} = d$$

$$35.99 = d$$

$$r = \frac{35.99}{2}$$

$$= 18 \text{ cm}$$

$$c) C_{\text{ir}} = \pi d$$

$$46 = 3.14 \times d$$

$$\frac{46}{3.14} = d$$

$$14.33 = d$$

$$r = \frac{14.33}{2}$$

$$= 7.2 \text{ cm}$$

$$9. d = 25$$

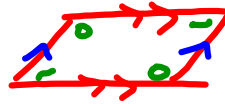
$$C_{\text{ir}} = \pi d$$

$$= 3.14 \times 25$$

$$= 78.5 \text{ cm}$$

Parallelograms

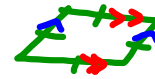
What is a parallelogram?



A parallelogram is a quadrilateral which has opposite sides that are parallel and equal. The opposite angles of a parallelogram are also equal.

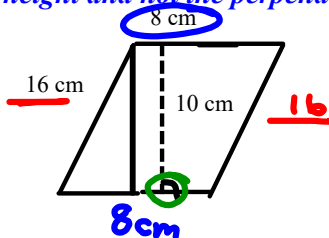
What is a rhombus?

A rhombus is a special parallelogram that has 4 equal sides.



How do you find the perimeter and area of a parallelogram?

To find the perimeter add up the four sides of the parallelogram (*be sure to add only the slant height and not the perpendicular height*).



$$\begin{aligned} \text{Per} &= 16\text{cm} + 16\text{cm} + 8\text{cm} + 8\text{cm} \\ &= 48\text{cm} \end{aligned}$$

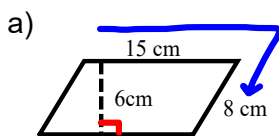
How do you find the area? (look for 90°)

$$\begin{aligned} \text{Area} &= b \times h \\ &= 8 \times 10 \\ &= 80 \text{ cm}^2 \end{aligned}$$

where h is the perpendicular height

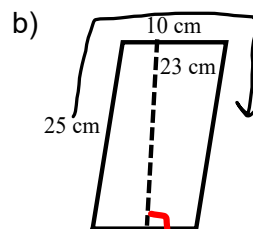
Your Turn

Example 1) Find the perimeter and area of each of the following:



$$\begin{aligned} P &= 15\text{cm} + 8\text{cm} + 15\text{cm} + 8\text{cm} \\ &= 46\text{cm} \end{aligned}$$

$$\begin{aligned} A &= b \times h \\ &= 15\text{cm} \times 6\text{cm} \\ &= 90 \text{ cm}^2 \end{aligned}$$

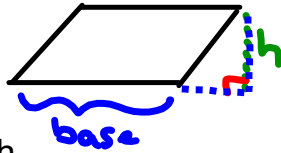
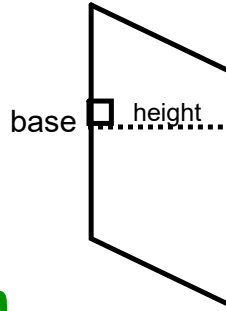
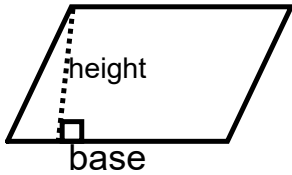


$$\begin{aligned} P &= 25\text{cm} + 10\text{cm} + 25\text{cm} + 10\text{cm} \\ P &= 70\text{cm} \end{aligned}$$

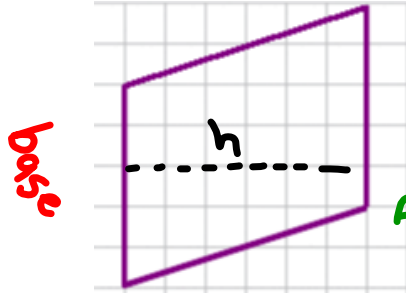
$$\begin{aligned} A &= b \times h \\ &= 10\text{cm} \times 23\text{cm} \\ &= 230 \text{ cm}^2 \end{aligned}$$

Parallelograms

Must look for the 90° to determine base and height.



Ex) Find the area of each

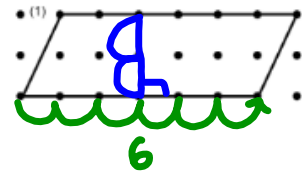


$b = 5 \text{ units}$
 $h = 6 \text{ units}$

$$A = b \times h$$

$$= 5 \times 6$$

$$= 30 \text{ units}^2$$



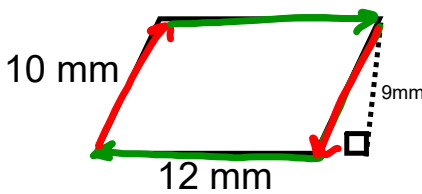
$\text{base} = 6$
 $\text{height} = 2$

$$A = b \times h$$

$$= 6 \times 2$$

$$12 \text{ units}^2$$

Find the area and the perimeter



$$A = b \times h$$

$$= 12 \text{ mm} \times 9 \text{ mm}$$

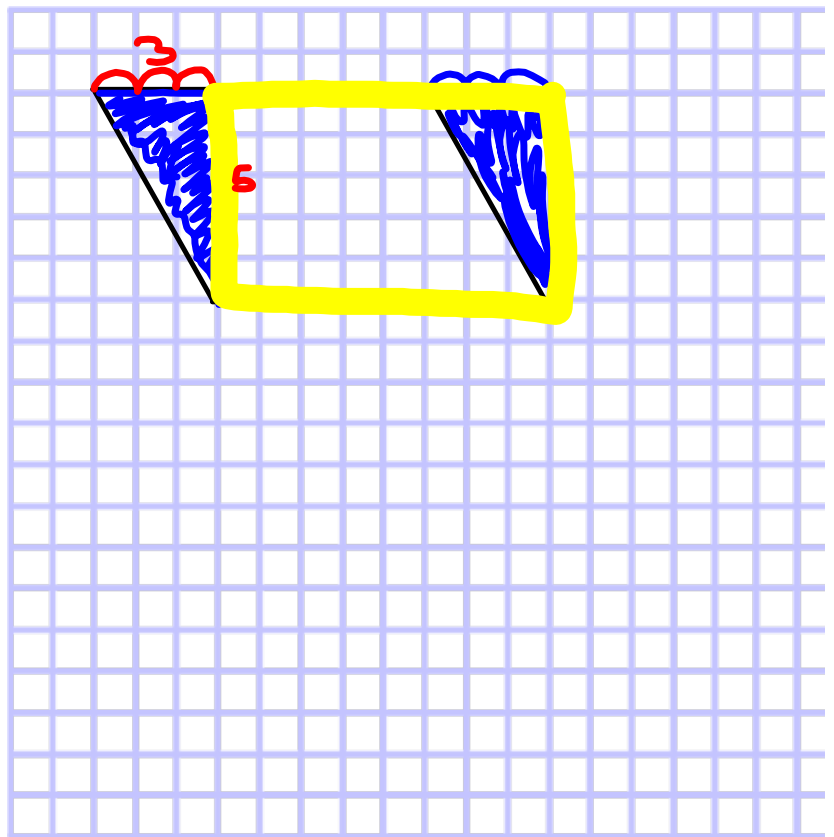
$$= 108 \text{ mm}^2$$

$$P = 12 \text{ mm} + 10 \text{ mm} + 12 \text{ mm} + 10 \text{ mm}$$

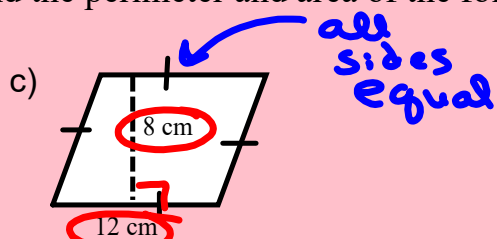
$$= 44 \text{ mm}$$

a) Show how the parallelogram can be rearranged to form a rectangle

• •



Find the perimeter and area of the following:

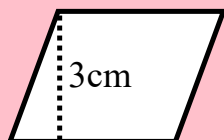


$$\begin{aligned}
 A &= b \times h \\
 &= 12\text{cm} \times 8\text{cm} \\
 &= 96\text{cm}^2
 \end{aligned}$$

$$\begin{aligned}
 P &= 12\text{cm} + 12\text{cm} + 12\text{cm} + 12\text{cm} \\
 &= \text{or} \\
 &= 12\text{cm} \times 4 \\
 &= 48\text{cm}
 \end{aligned}$$

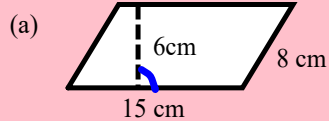
d) find the length of the base of the following:

$$\text{Area} = 45\text{ cm}^2$$

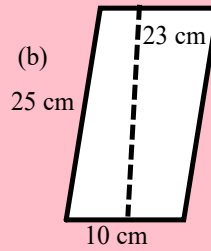


$$\begin{aligned}
 A &= b \times h \\
 45\text{cm}^2 &= b \times 3 \\
 \div 3\text{cm} & \quad \div 3\text{cm} \\
 \boxed{15\text{cm} = b}
 \end{aligned}$$

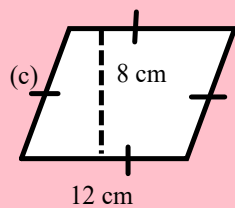
Find the area of each of the following:



$$\begin{aligned} A &= b \times h \\ &= 15 \times 6 \\ &= 90 \text{ cm}^2 \end{aligned}$$



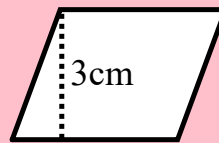
$$\begin{aligned} A &= b \times h \\ &= 10 \times 23 \\ &= 230 \text{ cm}^2 \end{aligned}$$



$$\begin{aligned} A &= b \times h \\ &= 12 \times 8 \\ &= 96 \text{ cm}^2 \end{aligned}$$

d) find the length of the base of the following:
(d)

$$\text{Area} = 45 \text{ cm}^2$$

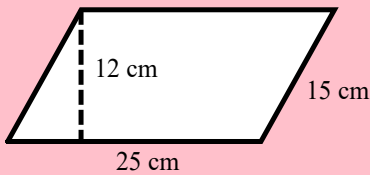


$$\begin{aligned} A &= b \times h \\ 45 \text{ cm} &= b \times 3 \text{ cm} \end{aligned}$$

$$\underline{45 \text{ cm}} = b$$

$$3 \text{ cm}$$

$$b = 15 \text{ cm}$$



$$\begin{aligned} A &= b \times h \\ &= 25 \times 12 \\ &= 300 \text{ cm}^2 \end{aligned}$$

Class/Homework

$$A = b \times h$$

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1(a,b), #2, _____

Test on the first part of Unit 4 will be next week. (Thursday)