

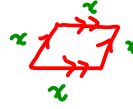
### Parallelograms

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.

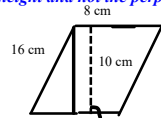
What is a rhombus?

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*).



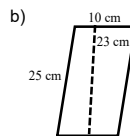
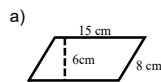
Per =

How do you find the area?

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

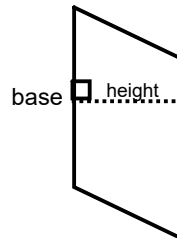
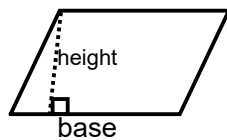
#### Your Turn

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



## Parallelograms

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



$$A_{//} = b \times h$$

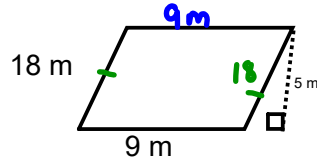
rearrange to find base or height if given area

$$b_{//} = \frac{A_{//}}{h_{//}}$$

$$h_{//} = \frac{A_{//}}{b_{//}}$$

Perimeter = side + side + side + side

a) Find the area and the perimeter



$$P = S + S + S + S$$

$$= 9m + 18m + 9m + 18m$$

$$= 54m$$

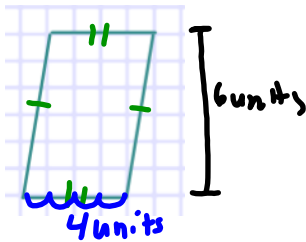
$$A_{||} = b \times h$$

$$= 9m \times 5m$$

$$= 45m^2$$

Ex) Find the area of each

b)



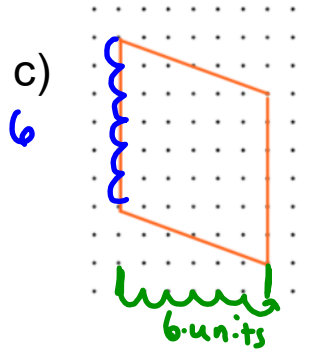
$$A = ?$$

$$A = b \times h$$

$$= 4 \times 6$$

$$= 24 \text{ unit}^2$$

c)

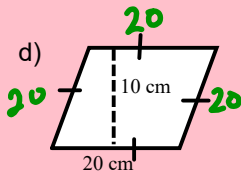


$$A_{||} = b \times h$$

$$= 6 \times 6$$

$$= 36 \text{ unit}^2$$

Find the perimeter and area of the following:



$$P = S + S + S + S$$

$$= 20 + 20 + 20 + 20$$

$$P = 80 \text{ cm}$$

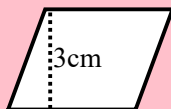
$$A = b \times h$$

$$= 20 \text{ cm} \times 10 \text{ cm}$$

$$= 200 \text{ cm}^2$$

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

$$\text{Area} = 60 \text{ cm}^2$$



$$b = ?$$

$$A = 60 \text{ cm}^2$$

$$h = 3 \text{ cm}$$

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

$$= \frac{60 \text{ cm}^2}{3 \text{ cm}}$$

$$b = 20 \text{ cm}$$

# Class/Homework

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# 1(a,b), #2, #6, #7b, #8, #10

don't put  
copy just write  
b)

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

$$\begin{aligned} 1a) A &= ? & A &= b \times h \\ b &= 5 \\ h &= 4 \end{aligned}$$

$$\begin{aligned} 7a) A &= 10 \text{ cm} \\ &\wedge \\ &b \times h \\ &1 \times 10 \\ &2 \times 5 \end{aligned}$$

$$\begin{aligned} 7b) A &= 18 \text{ cm} \\ &\wedge \\ &b \times h \\ &1 \times 18 \\ &2 \times 9 \\ &3 \times 6 \end{aligned}$$