1) $32 \times 20 = 640$

2) 10% of 42 = 4.2

3) 20% of 25 = 5
1/5 ÷5

4) circumference is r = 4cm
3 × 8 = 24

5) 8006 ÷ 2 = 4003

6) 50% of 120 = 60

7) A of parallelogram if h = 7cm, b = 4cm
A = bh
7×4
28cm²

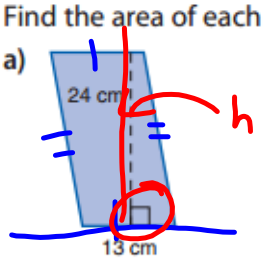
8) 84 ÷ 2 = 42

9) $\frac{1}{3}$ of 15 = 5
÷3

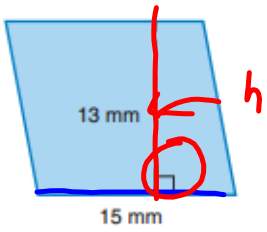
10) 55 + 125
= 180

2. Find the area of each parallelogram.

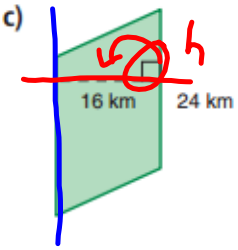
a)



b)



c)



$A = bh$

$= 13(24)$

$= 312\ cm^2$

b & h

$A = bh$

$= 15(13)$

$= 195\ mm^2$

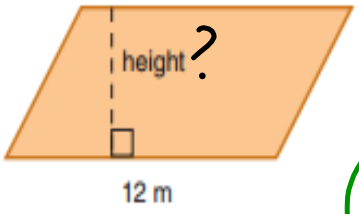
$A = bh$

$= 24(16)$

$= 384\ km^2$

6. Use the given area to find the base or the height of each parallelogram.

a) Area = 60 m²



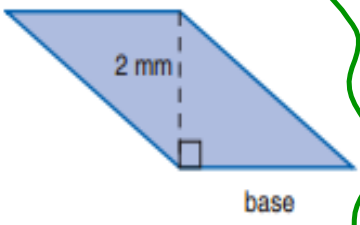
$A = bh$

$60 = 12(h)$

$h = \frac{60}{12}$

$h = 5m$

b) Area = 6 mm²



$A = bh$

$6 = b(2)$

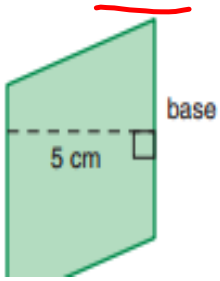
$b = \frac{6}{2}$

$= 3mm$

$A = bh$

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

c) Area = 30 cm²

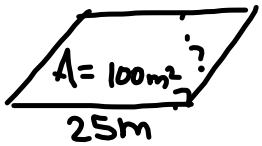


$A = bh$

$30 = b(5)$

$b = \frac{30}{5}$

$= 6\ cm$



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

$h = \frac{100}{25}$

$h = 4\ m$

10. **Take It Further** A restaurant owner built a patio in front of his store to attract more customers.

a) What is the area of the patio?

b) What is the total area of the patio and gardens?

c) How can you find the area of the gardens? Show your work.

Bang!

a) $A = bh$

$= 14.4(6.6)$

$= 95.04\ m^2$

b) $14.4m + 5.6m = 20m$

$A_{\square} = bh$

$= 20 \times 6.6$

$= 132m^2$

c) $A_{\square} = bh$

$= 5.6(6.6)$

$= 36.96m^2$

$132m^2 - 95.04\ m^2 = 36.9$

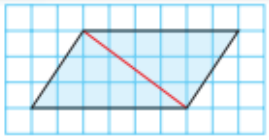
When we draw a diagonal in a parallelogram,
we make 2 congruent triangles.

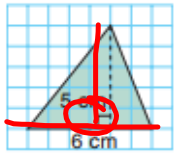
Congruent triangles have the same area.

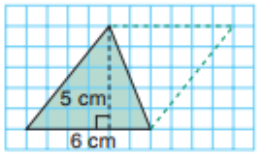
The area of the two congruent triangles is
equal to the area of the parallelogram.

So, the area of one triangle is $\frac{1}{2}$ the area of the parallelogram.

$A_{\triangle} = \frac{bh}{2}$



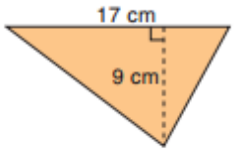

6 cm


5 cm
6 cm

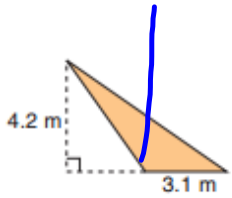
Example

Find the area of each triangle.

a)



b)



For an obtuse triangle, the height might be drawn outside the triangle.

$A = \frac{bh}{2}$

$= \frac{17(9)}{2}$

$= \frac{153}{2}$

$= 76.5 cm^2$

$A = \frac{bh}{2}$

$= \frac{3.1(4.2)}{2}$

$= \frac{13.02}{2}$

$= 6.51 m^2$

5) a) $A = 18 cm^2$, 9cm, h?

$A = \frac{bh}{2}$

$18 = \frac{(9)h}{2}$

$A = b(h) \div 2$

$18 = 9(h) \div 2$

$h = \_\_\_$

b)