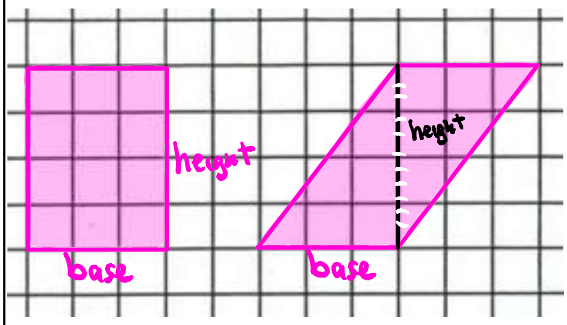
16.2 Area of Parallelogram and Triangles

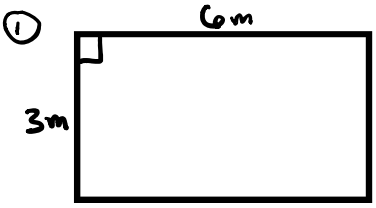
Write your questions here!

NOTES

PARALLELOGRAMS: $A = (\text{base})(\text{height})$



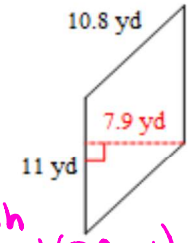
TRY IT! Find the area of the following:

① 

$A = b \cdot h$

$A = (6m)(3m)$

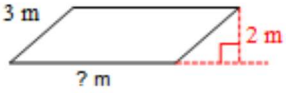
$A = 18 m^2$

② 

$A = bh$

$= (11 yd)(7.9 yd)$

$A = 86.9 yd^2$

③ 

Area = 12 m²

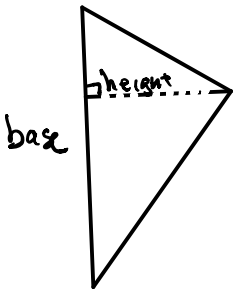
$A = b \cdot h$

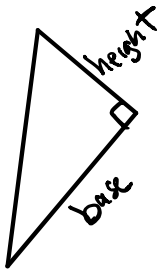
$12m^2 = b \cdot (2m)$

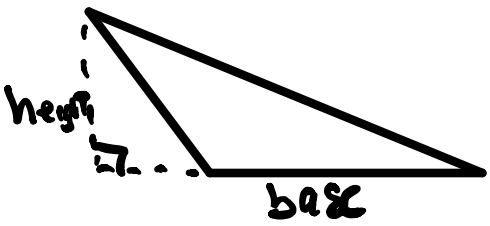
$6m = b$

TRIANGLES: $A = \frac{1}{2}(\text{base})(\text{height})$

Altitude = height







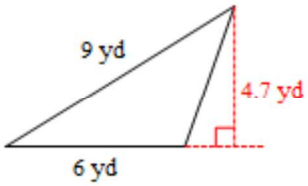
$A = \frac{1}{2}bh$

$35 = \frac{1}{2}(11.3m)\,h$

$35 = 5.65m \cdot h$

$6.19m \approx h$

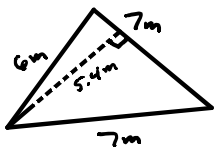
TRY IT! Find the area of the following:

④ 

$A = \frac{1}{2}bh$

$= \frac{1}{2}(6 yd)(4.7 yd)$

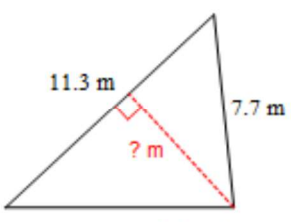
$A = 14.1 yd^2$

⑤ 

$A = \frac{1}{2}b \cdot h$

$A = \frac{1}{2}(7m)(5.4m)$

$A = 9.45 m^2$

⑥ 

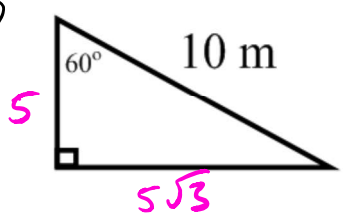
Area = 35 m²

Write your questions here!

SPECIAL RIGHT TRIANGLES	PYHTAGOREAN THEOREM	TRIG FUNCTIONS
$30° - 60° - 90°$	$a^2 + b^2 = c^2$	sin
$45° - 45° - 90°$		cos
		tan

Find the area of the following:

(7)

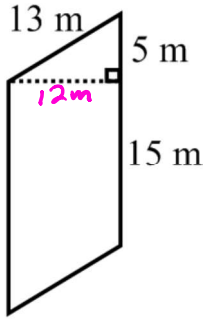


$A = \frac{1}{2}bh$

$= \frac{1}{2}(5\sqrt{3})(5)$

$A = 12.5\sqrt{3}\ m^2$

(8)

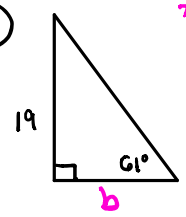


$A = b \cdot h$

$= (20m)(12m)$

$A = 240\ m^2$

(9)



$\tan 61° = \frac{19}{b}$

$b \cdot \tan 61° = 19$

$b = \frac{19}{\tan 61}$

$b \approx 10.53$

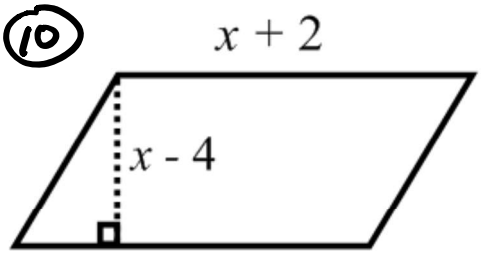
$A = \frac{1}{2}bh$

$= \frac{1}{2}(10.53)(19)$

$A = 100.035\ un^2$

Bring the pain

(10)



Area = 16 cm^2

$A = b \cdot h$

$16 = (x+2)(x-4)$

$16 = x^2 - 2x - 8$

$0 = x^2 - 2x - 24$

$0 = (x-6)(x+4)$

$0 = x - 6$ | $0 = x + 4$

$6 = x$ | $-4 = x$

SIDES: $(6) - 4 = 2$ | SIDES $(-4) + 2 = -2$

$(6) + 2 = 8$ | $(-4) - 4 = -8$

$x \neq -4$

Summarize your notes!