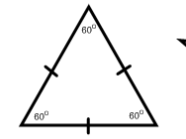
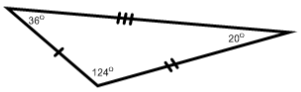
Name: _____ Date: _____

Area of Triangles

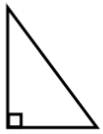
Classifying Triangles by their Angles



Acute - all angles acute



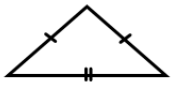
Obtuse - one obtuse angle



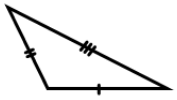
Right - one right angle

Classifying Triangles by their Sides

Equilateral - all sides congruent

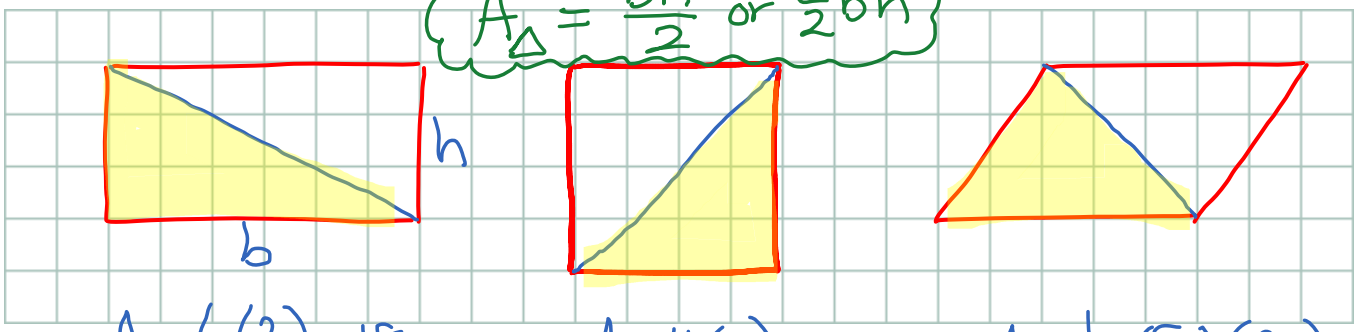


Isosceles - two sides congruent



Scalene - no sides are congruent

$A_\Delta = \frac{bh}{2}$ or $\frac{1}{2}bh$



$A = \frac{6(3)}{2} = \frac{18}{2}$

$A = 9 \text{ units}^2$

$A = \frac{4(4)}{2}$

$A = 8 \text{ units}^2$

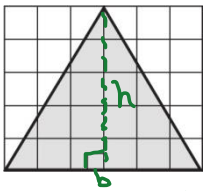
$A = \frac{1}{2}(5)(3)$

$A = 2.5(3)$

$A = 7.5 \text{ units}^2$

Find the area of each triangle. Label your answer appropriately.

1)

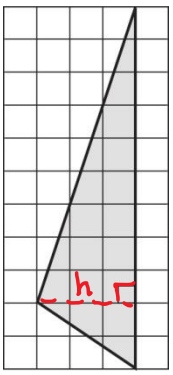


$b = 6$ units, $h = 5$ units

$A = \frac{1}{2}(6)(5)$

$= 3(5) = 15 \text{ units}^2$

2)



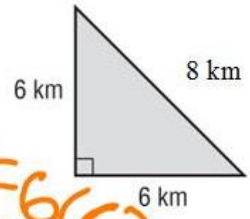
$b = 11$ units

$h = 3$ units

$A = \frac{1}{2}(3)(11)$

$= \frac{1}{2}(33) = 16.5 \text{ units}^2$

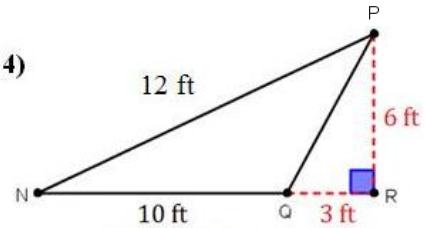
3)



$A = \frac{6(6)}{2}$

$A = 18 \text{ km}^2$

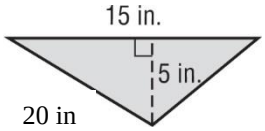
4)



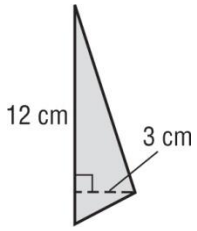
$A = \frac{(10)(6)}{2}$

$= \frac{60}{2} = 30 \text{ ft}^2$

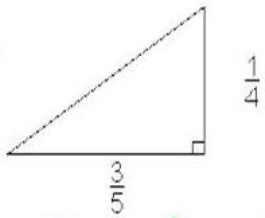
5)



6)

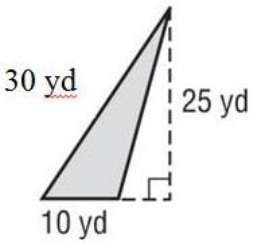


7)



$A = \frac{1}{2} \times \frac{3}{5} \times \frac{1}{4} = \frac{3}{40}$ units^2

8)



$25 \times \frac{5}{12} \frac{5}{5}$

$A = \frac{(10)(25)}{2}$ $A = \frac{1}{2}(10)(25)$

$A = 125\ yd^2$

What if we have to find the base or height measurement when given the area?

Find the missing dimension. Label your answer appropriately.

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

9) base: 4 in.
area: 22 in^2

10) height: 1 yd
area: 2.5 yd^2

$22 = \frac{1}{2}(4)h$

$\frac{22}{2} = \frac{2h}{2}$

$h = 11$ in