**Area of Triangles**

**Same old formula...** Area =

1

b

h

b

h

2.

 **Hero’s Formula**  p = Area =√ p(p – a)(p – b)(p – c)

* This formula is used when you have all 3 sides of a triangle



Example:

3 cm

5 cm

7 cm

p =

p =

p =

p = 7.5

Area =√ p(p – a)(p – b)(p – c)

Area =√ 7.5(7.5 – 5)(7.5 – 3)(7.5 – 7)

Area =√ 7.5(2.5)(4.5)(0.5)

Area =√ 7.5(5.625)

Area =√ 42.1875

Area = 6.495 cm2

3. **Trigonometric Formula**

It is possible to calculate the area of a triangle if you know the length of two sides and the measure of the contained angle (**sandwich**). \*Hint: this formula is usually used with the *Sine Law*\*

Area =

a

b

C

Example:

3.2

6

88°

3

4

30°

Area = Area =

Area = Area =

Area = Area =

Area = Area =

Area = 3 cm2 Area = 9.5 cm2