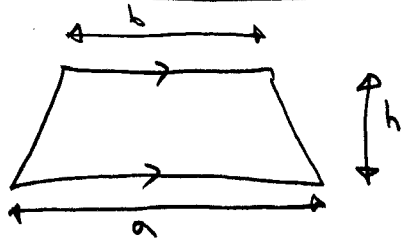
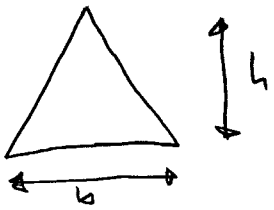
Notes:

AREA OF A TRAPEZIUM



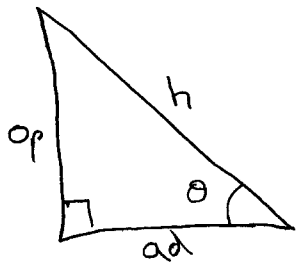
$$A = h\left(\frac{b+a}{2}\right)$$

AREA OF A TRIANGLE



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

TRIG



TRIG FORMULA

$$S^{O}H \quad C^{A}H \quad T^{O}A$$

$$\sin\theta = \frac{op}{h}, \quad \cos\theta = \frac{ad}{h}, \quad \tan\theta = \frac{op}{ad}$$

PYTHAGORAS

$$h^2 = (op)^2 + (ad)^2$$

SIMULTANEOUS EQ. EXAMPLE

① $y = 2x^2$

② $y = x + 3$

1) REARRANGE THE LINEAR EQ FOR x

$$x = y - 3$$

2) SUB. INTO QUADRATIC

$$y = 2x^2$$
$$y = 2(y-3)^2$$
$$y = 2(y^2 - 6y + 9)$$
$$y = 2y^2 - 12y + 18$$
$$0 = 2y^2 - 13y + 18$$

4) SOLVE FOR y

$$y = \frac{+13 \pm \sqrt{13^2 - 4\times 2 \times 18}}{2\times 2} = +4.5, +2$$

Comments:

5) FIND x FROM LINEAR EQ.

$y = +4.5$
$x = y - 3$
$= 1.5$

$y = +2$
$x = y - 3$
$= -1$