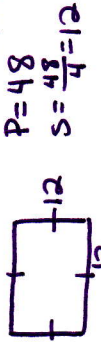


NOTES: AREA DAY 2

EXAMPLE 1: Find the area of a square with a perimeter of 48 units.

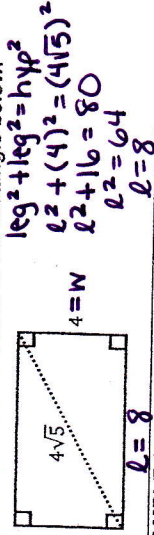


$$A = s^2$$

$$A = (12)^2$$

$$A = 144$$

EXAMPLE 2: Find the area of the rectangle below.



$$A = \ell w$$

$$A = 8(4)$$

$$A = 32$$

$$\ell^2 + w^2 = \text{hyp}^2$$

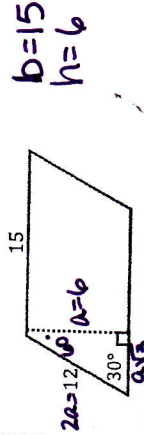
$$\ell^2 + (4)^2 = (4\sqrt{5})^2$$

$$\ell^2 + 16 = 80$$

$$\ell^2 = 64$$

$$\ell = 8$$

EXAMPLE 3: Find the area of the parallelogram below.

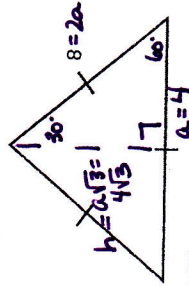


$$A = bh$$

$$A = 15(6)$$

$$A = 90$$

EXAMPLE 4: Find the area of the triangle below.



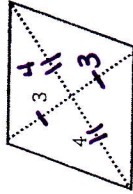
$$A = \frac{1}{2}bh$$

$$A = \frac{1}{2}(8)(4\sqrt{3})$$

$$A = 4(4\sqrt{3})$$

$$A = 16\sqrt{3}$$

EXAMPLE 5: Find the area of the rhombus below.

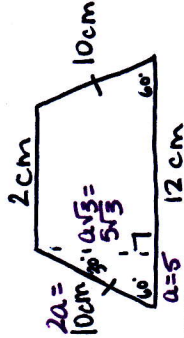


$$A = \frac{1}{2}(d_1)(d_2)$$

$$A = \frac{1}{2}(4)(3)$$

$$A = 6$$

EXAMPLE 6: An isosceles trapezoid has legs that measure 10 cm, and bases of 12 cm and 2 cm. The base angles measure 60° . Find the height and the area of the trapezoid.



$$h = 5\sqrt{3} \text{ cm}$$

$$b_1 = 12 \text{ cm}$$

$$b_2 = 2 \text{ cm}$$

$$A = \frac{1}{2}h(b_1 + b_2)$$

$$A = \frac{1}{2}(5\sqrt{3})(12 + 2)$$

$$A = \frac{1}{2}(5\sqrt{3})(14)$$

$$A = 7(5\sqrt{3})$$

$$A = 35\sqrt{3} \text{ cm}^2$$