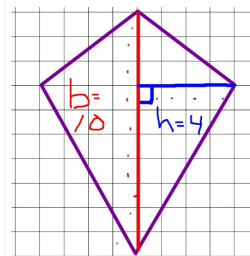


Friday, March 27, 2020

Sec 10 - 2: Area of a Kite

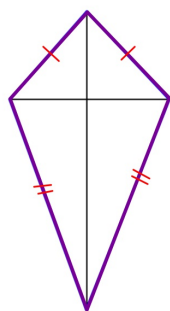
Find the area of this kite.



$$A \text{ of } 1 \triangle = \frac{1}{2}(10)(4) = 20$$

$$A \text{ of Kite} = 2\Delta's = 2(20) = 40$$

Formula for the area of a Kite



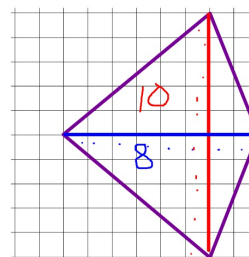
Same as the formula
for a Rhombus:

$$A = \frac{1}{2}d_1d_2$$

Find the area of each Kite. Round to
the nearest hundredth.

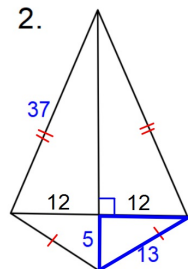
1.

$$A = \frac{1}{2}d_1d_2$$

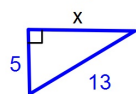


$$A = \frac{1}{2}(8)(10) = 40$$

2.



$$A = \frac{1}{2}d_1d_2$$



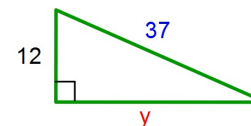
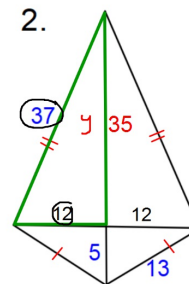
$$x^2 + 5^2 = 13^2$$

$$\sqrt{x^2} = \sqrt{13^2 - 5^2}$$

$$x = 12$$

$$d = 2 \cdot 12$$

2.



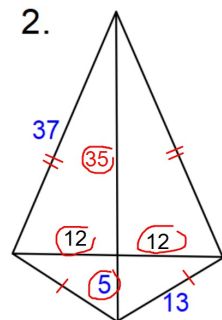
$$y^2 + 12^2 = 37^2$$

$$\sqrt{y^2} = \sqrt{37^2 - 12^2}$$

$$y = 35$$

$$d = 5 + 35$$

2.



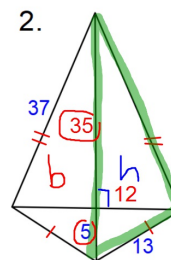
$$A = \frac{1}{2}d_1d_2$$

$$A = \frac{1}{2}(2 \cdot 12)(5 + 35) = 480$$

What if you forget the formula?

~~$$A = \frac{1}{2}d_1d_2$$~~

2.



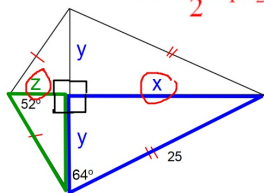
$$A \text{ of } 1\Delta = \frac{1}{2}(12)(5 + 35) = 240$$

$$A \text{ of kite} = 2\Delta's = 2(240) = 480$$

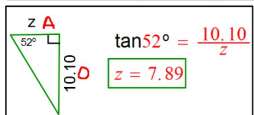
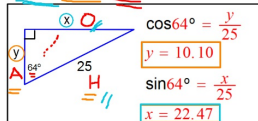


3.

$$A = \frac{1}{2}d_1d_2$$



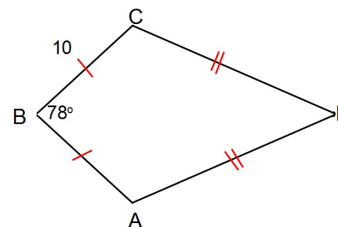
SOHCAHTOA



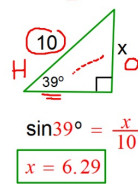
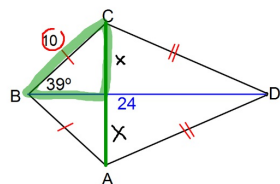
$$A = \frac{1}{2}(x+z)(2y) = \frac{1}{2}(30.36)(20.20) = 306.64$$

4. BD = 24.

$$A = \frac{1}{2}d_1d_2$$

4. BD = 24. $A = \frac{1}{2}d_1d_2$

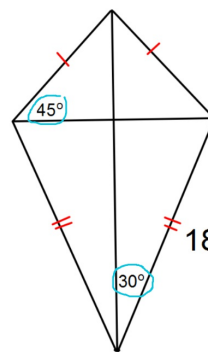
$$A = \frac{1}{2}(24)$$

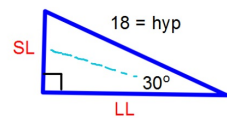
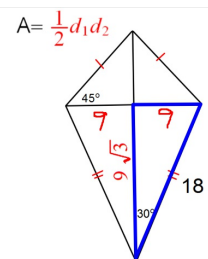


$$A = \frac{1}{2}(24)(2 \cdot 6.29) = 150.96$$

5.

$$A = \frac{1}{2}d_1d_2$$

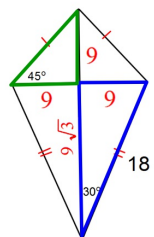
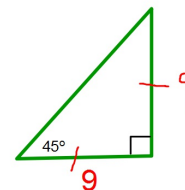
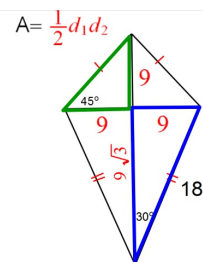




$$SL = Hyp \div 2 = 18 \div 2 = 9$$

$$LL = SL \cdot \sqrt{3} = 9\sqrt{3}$$

9

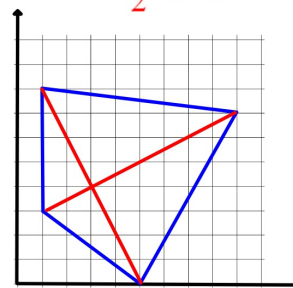


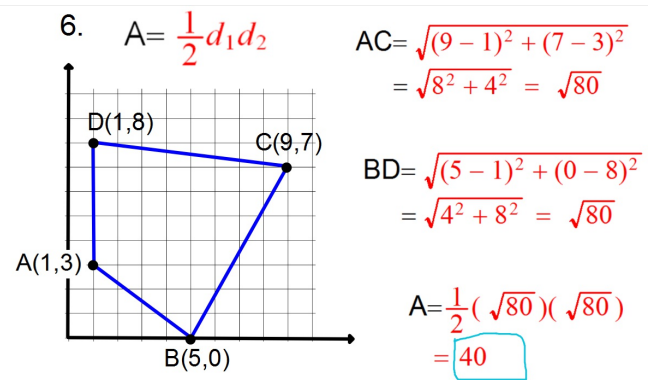
$$A = \frac{1}{2}d_1d_2$$

$$\begin{aligned} A &= \frac{1}{2}(9+9)(9\sqrt{3}+9) \\ &= \frac{1}{2}(18)(9\sqrt{3}+9) \\ &= 9(9\sqrt{3}+9) = 81\sqrt{3} + 81 \end{aligned}$$



6. $A = \frac{1}{2}d_1d_2$





You can now do Practice #10
which is posted on my blog.

