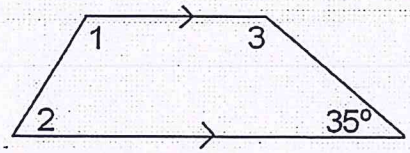
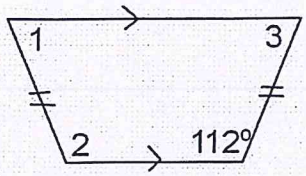
Bellwork Geometry Thursday, February 13, 2020

1. Find the measure of all the missing angles that you are able to.

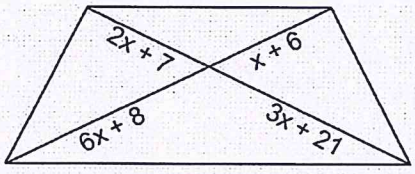
a. Trapezoid



b. Isosceles Trapezoid

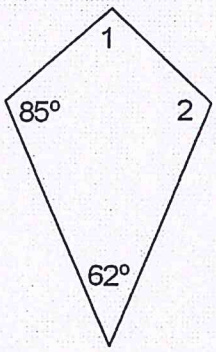


2. Find the value of x so that the figure is an Isosceles Trapezoid

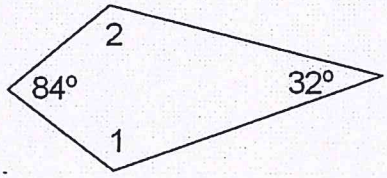


For each of the following Kites find the measure of as many of the numbered angles as you can.

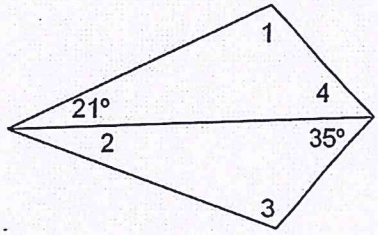
3.



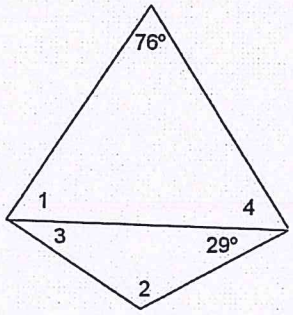
4.



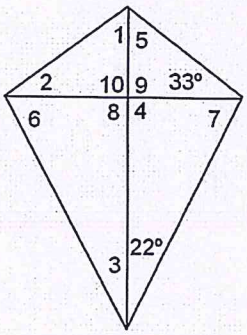
5.



6.

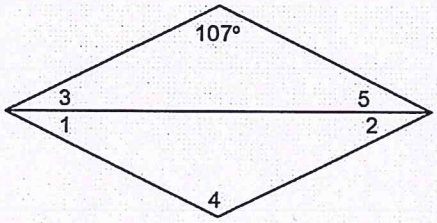


7.

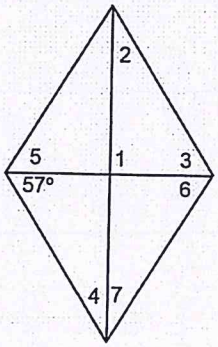


For each Rhombus find the measure of as many of the numbered angles as you can.

8.



9.



10. What is the most precise name for quadrilateral WXYZ?

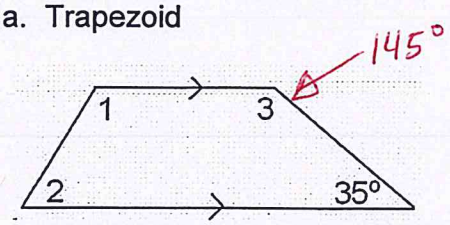
$W(0,7)$ $X(6,3)$ $Y(7,-2)$ $Z(-5,6)$

Bellwork Geometry Thursday, February 13, 2020

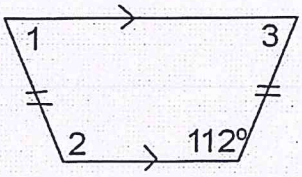
ANSWERS

1. Find the measure of all the missing angles that you are able to.

a. Trapezoid

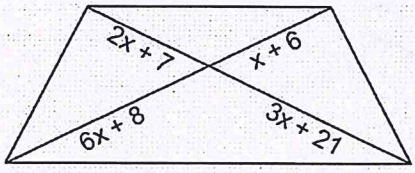


b. Isosceles Trapezoid



$\angle 1 = 68°$
$\angle 2 = 112°$
$\angle 3 = 68°$

2. Find the value of x so that the figure is an Isosceles Trapezoid



DIAGONALS are $\cong$

~~$2x+7 = 3x+21$~~ ~~$-x \quad -x$~~ ~~$7 = x+21$~~ ~~$-21 \quad -21$~~ ~~$-14 = x$~~

$2x+7 + 3x+21 = x+6 + 6x+8$

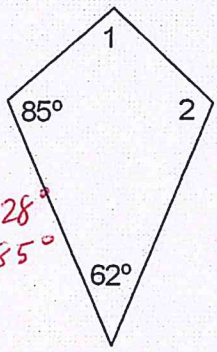
$5x + 28 = 7x + 14$

$14 = 2x$

$x = 7$

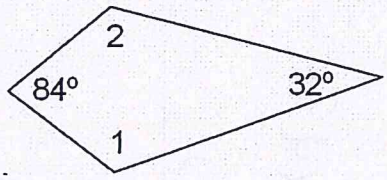
For each of the following Kites find the measure of as many of the numbered angles as you can.

3.



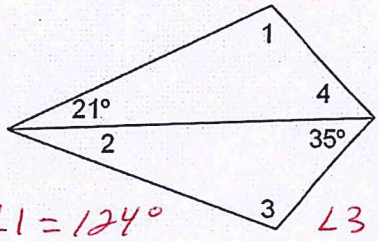
$\angle 1 = 128°$
$\angle 2 = 85°$

4.



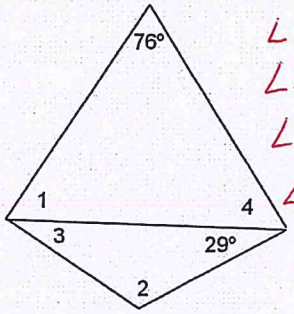
$\angle 1 = \angle 2 = 122°$

5.



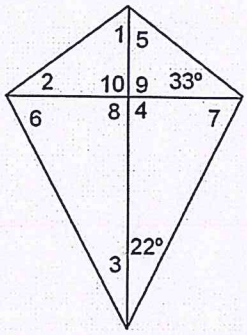
$\angle 1 = 124°$
$\angle 2 = 21°$
$\angle 3 = 124°$
$\angle 4 = 35°$

6.



$\angle 1 = 52°$
$\angle 2 = 122°$
$\angle 3 = 29°$
$\angle 4 = 52°$

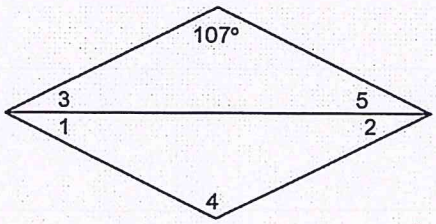
7.



$\angle 1 = 57°$
$\angle 2 = 33°$
$\angle 3 = 22°$
$\angle 4 = 90°$
$\angle 5 = 57°$
$\angle 6 = 68°$
$\angle 7 = 68°$
$\angle 8 = 90°$
$\angle 9 = 90°$
$\angle 10 = 90°$

For each Rhombus find the measure of as many of the numbered angles as you can.

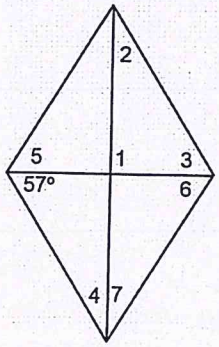
8.



$\angle 1 = \angle 2 = \angle 3 = \angle 5 = 36.5°$

$\angle 4 = 107°$

9.



$\angle 1 = 90°$
$\angle 2 = 33°$
$\angle 3 = 57°$
$\angle 4 = 33°$
$\angle 5 = 57°$
$\angle 6 = 57°$
$\angle 7 = 33°$

10. What is the most precise name for quadrilateral WXYZ?

$W(0,7)$ $X(6,3)$ $Y(7,-2)$ $Z(-5,6)$

#10 W(0,7) X(6,3) Y(7,-2) Z(-5,6)

Is it a ll-gram? midpts of diagonals

NOT a ll-gram b/c diagonals don't bisect each other

$WY: \left(\frac{0+7}{2}, \frac{7+-2}{2}\right) = \left(\frac{7}{2}, \frac{5}{2}\right)$

$XZ: \left(\frac{6+-5}{2}, \frac{3+6}{2}\right) = \left(\frac{1}{2}, \frac{9}{2}\right)$

Is it a Trapezoid? slopes of all 4 sides

$WX: m = \frac{7-3}{0-6} = \frac{4}{-6} = -\frac{2}{3}$

$XY: m = \frac{3--2}{6-7} = \frac{5}{-1} = -5$

$YZ: m = \frac{6--2}{-5-7} = \frac{8}{-12} = -\frac{2}{3}$

$ZW: m = \frac{7-6}{0--5} = \frac{1}{5}$

It's a Trapezoid b/c only one pair of sides are parallel

Is it an Isosceles trapezoid

are legs congruent?

$XY = \sqrt{(7-6)^2 + (-2-3)^2} = \sqrt{1^2 + (-5)^2} = \sqrt{26}$

$1 + 25$

$ZW = \sqrt{(0--5)^2 + (7-6)^2} = \sqrt{5^2 + 1^2} = \sqrt{26}$

WXYZ is an Isosceles Trapezoid b/c it's a Trapezoid w/ $\cong$ legs