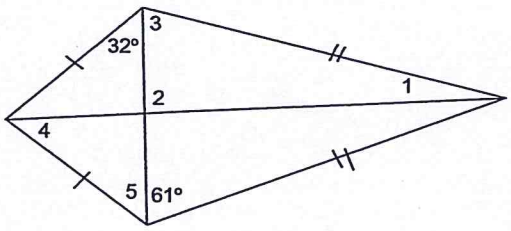
Bellwork Geometry Monday, February 24, 2020

1. What is the most precise name for quadrilateral EFGH?

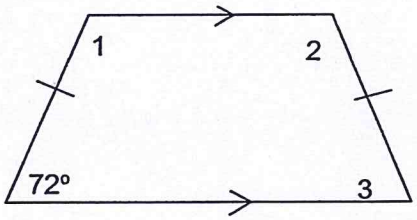
$E(-1,-3)$ $F(2,5)$ $G(10,2)$ $H(7,-6)$

2. Find the value of as many of the numbered angles as possible.

a)



b)



3. Given this proportion, fill in the blanks to make a true statement: $\frac{7}{9} = \frac{B}{C}$

a) $\frac{C}{B} =$ _____ b) _____ $= \frac{9}{C}$ c) $9B =$ _____

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ANSWERS

1. What is the most precise name for quadrilateral EFGH?

$E(-1,-3)$ $F(2,5)$ $G(10,2)$ $H(7,-6)$

midpoint of diag:

EG: $\left(\frac{-1+10}{2}, \frac{-3+2}{2}\right) = \left(\frac{9}{2}, -\frac{1}{2}\right)$

FH: $\left(\frac{2+7}{2}, \frac{5+-6}{2}\right) = \left(\frac{9}{2}, -\frac{1}{2}\right)$

same midpt EFGH is a ||-gram b/c diag bisect

Length of Diag:

EG: $\sqrt{(10-1)^2+(2--3)^2} = \sqrt{11^2+5^2} = \sqrt{146}$

FH: $\sqrt{(7-2)^2+(-6-5)^2} = \sqrt{5^2+(-11)^2} = \sqrt{146}$

diag $\cong$ so EFGH is a Rectangle

Slope of diag:

EG: $m = \frac{2--3}{10--1} = \frac{5}{11}$

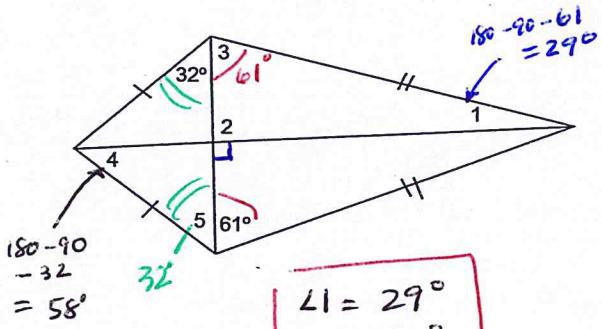
FH: $m = \frac{5--6}{2-7} = \frac{11}{-5}$

⊥ diag so EFGH is a Rhombus

EFGH IS A SQUARE b/c it is both a Rhombus & a Rectangle

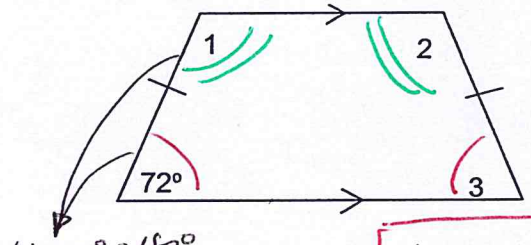
2. Find the value of as many of the numbered angles as possible.

a)



∠1 = 29°
∠2 = 90°
∠3 = 61°
∠4 = 58°
∠5 = 32°

b)



∠1 + 72° = 180°
∠1 = 108°

∠1 = 108°
∠2 = 108°
∠3 = 72°

3. Given this proportion, fill in the blanks to make a true statement: $\frac{7}{9} = \frac{B}{C}$

a) $\frac{C}{B} = \frac{9}{7}$ b) $\frac{7}{B} = \frac{9}{C}$ c) $9B = 7C$