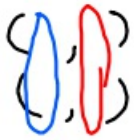
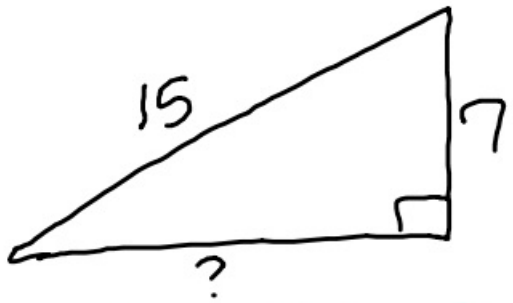
9-9-19 2nd Geo

Things we have discussed:

1. Pythagorean Theorem
   $leg^2 + leg^2 = hyp^2$
2. Complementary ∠'s → add up to 90°
3. Supplementary ∠'s → add up to 180.
4. Midpoint $\left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right)$
5. Vertical ∠'s  Always =.
6. Linear pair add up to 180°
7. Find endpoint or line segment when given midpoint (hopping)
8. Bisecting ∠'s (cut in half)
9. Pythagorean Triple → all are whole numbers.
10. Distance between points.
    
11. Collinear – points on same line
12. Coplanar – points on the same plane.

① 

$leg^2 + leg^2 = hyp^2$

$leg^2 + 7^2 = 15^2$

$leg^2 + 49 = 225$

$-49 \quad -49$

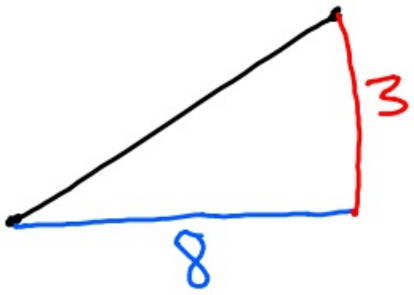
$\sqrt{leg^2} = \sqrt{176}$

$leg \simeq 13.3$

② What is the distance from (2,4) to (10,7)?

(2, 4)
(10, 7)

8 3



$leg^2 + leg^2 = hyp^2$

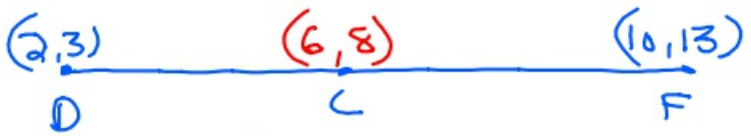
$8^2 + 3^2 = hyp^2$

$64 + 9 = hyp^2$

$\sqrt{73} = \sqrt{hyp^2}$

$hyp \simeq 8.5$

(3) On $\overline{DF}$, C is the midpoint. If D = (2,3) and F = (10,13). Where is C?



$\left(\frac{2+10}{2}, \frac{3+13}{2}\right)$

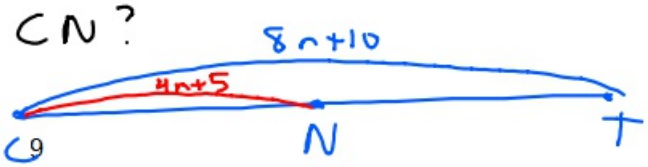
(4) Give the symbol for

a.) therefore $\therefore$

b.) approximately $\approx$

c.) congruent $\cong$

(5) If N is the midpoint of $\overline{CT}$ and CT = 8n+10, what is CN?



(6) $\angle 1$ and $\angle 2$ are vertical angles. $\angle 1 = 6n+4$ and $\angle 2 = 5n+10$. What is $\angle 1$?

$\angle 1 = \angle 2$

$6n+4 = 5n+10$

$-5n \quad -5n$

$n+4 = 10$

$-4 \quad -4$

$n = 6$

$\angle 1 = 6n+4$

$= 6 \cdot 6 + 4$

$= 40$