9-10-19 2nd Geo

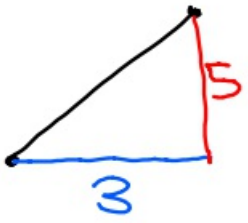
① Is a triangle that has sides of 3, 7, and 9 a right triangle? Explain.

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

$3^2 + 7^2 = 9^2$

$9 + 49 = 81$ ? NO

② Distance from (-1, 3) to (2, 8).


$3^2 + 5^2 = hyp^2$

$9 + 25 = hyp^2$

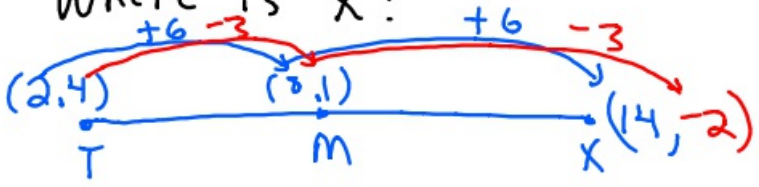
$\sqrt{34} = \sqrt{hyp^2}$

$5.8 \approx hyp$

③ On $\overline{TX}$, M is the midpoint.

If T = (2, 4) and M = (8, 1),

where is X?

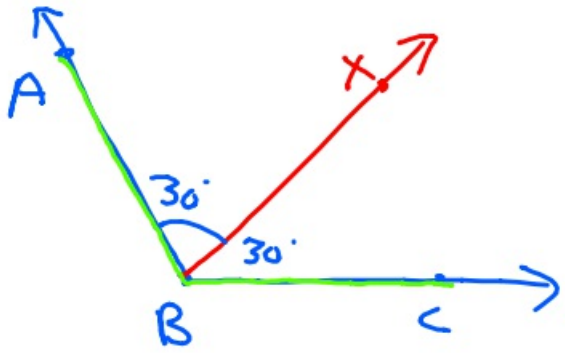


(4) $\therefore$ therefore

$\cong$ Congruent

$\approx$ approximately

(5) $\overrightarrow{BX}$ bisects $\angle ABC$. If $\angle XBA = 30^\circ$, what is measurement of $\angle ABC$? 60°




(6) Vertical $\angle$s : $\times$ =

Supplementary $\angle$s : Add up to 180°

Linear pair : $\angle$ Add up to 180°

Complementary $\angle$s : Add up to 90°

(7) $\angle 1$ and $\angle 2$ are complementary angles. $\angle 1 = 4n+10$ and $\angle 2 = 6n+10$. What is the measurement of $\angle 1$?

$$\angle 1 + \angle 2 = 90^\circ$$

$$4n+10+6n+10 = 90^\circ$$

$$10n + 20 = 90^\circ$$

$$-20 \quad -20$$

$$10n = 70$$

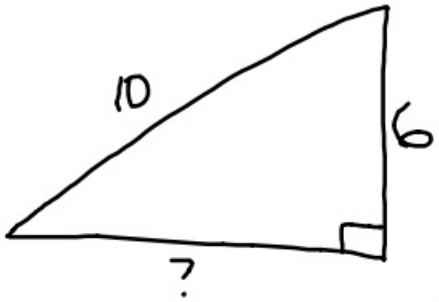
$$n = 7$$

$$\angle 1 = 4n+10$$

$$= 4 \cdot 7 + 10$$

$$= 38$$

(8)




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

$$leg^2 + 6^2 = 10^2$$

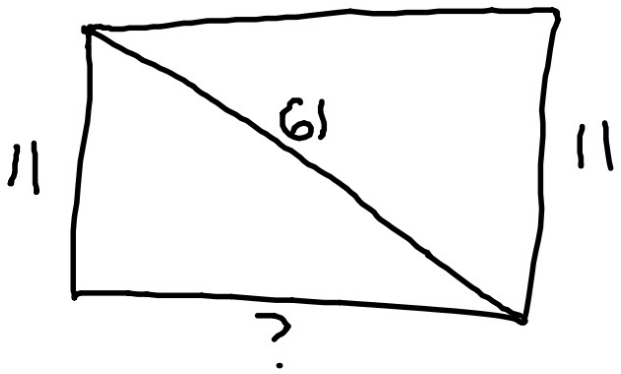
$$leg^2 + 36 = 100$$

$$-36 \quad -36$$

$$\sqrt{leg^2} = \sqrt{64}$$

$$leg = 8$$

9




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

$$11^2 + leg^2 = 61^2$$

$$121 + leg^2 = 3721$$

$$-121 \qquad -121$$

$$\sqrt{leg^2} = \sqrt{3600}$$

$$leg = 60$$

# 9-10-19 3rd Trig

$$8\overline{)251} \quad 31+\tfrac{3}{8}$$

$-24$

$11$

$-8$

$3$

$$7\overline{)295} \quad 42+\tfrac{1}{7}$$

$-28$

$15$

$-14$

$1$

① $\underline{x}+3\overline{)x^2+7x+1}$ $\quad x+4+\frac{-11}{x+3}$

$-(x^2+3x)$

$4x+1$

$-(4x+12)$

$-11$

② $x+2\overline{)x^2+9x+7}$ $\quad x+7+\frac{-7}{x+2}$

$-(x^2+2x)$

$7x+7$

$-(7x+14)$

$-7$

$x^2+9x-(x^2+2x)$

$x^2+9x-x^2-2x$

$7x$

③ $x-3 \overline{)\, x^2-5x-7}$

$x - 2 + \frac{-13}{x-3}$

$-(x^2-3x)$

$-2x-7$

$-(-2x+6)$

$-13$

④ $x-4 \overline{)\, x^2-5x+2}$

$x - 1 + \frac{-2}{x-4}$

$-(x^2-4x)$

$-1x+2$

$-(-1x+4)$

$-2$

⑤ $x-5 \overline{)\, x^2+7x+5}$

$x + 12 + \frac{65}{x-5}$

$-(x^2-5x)$

$12x+5$

$-(12x-60)$

$65$

⑥ $x+2 \overline{)\, x^3+8}$

Rewrite

$$x+2 \overline{)\, x^3+0x^2+0x+8}$$

$$x^2-2x+4$$

$$-(x^3+2x^2)$$

$$-2x^2+0x$$

$$-(-2x^2-4x)$$

$$4x+8$$

$$-(4x+8)$$

$$0$$

⑦ $x+2 \overline{)\, x^2+5}$

Rewrite $x+2 \overline{)\, x^2+0x+5}$

$$x-2+\frac{9}{x+2}$$

$$-(x^2+2x)$$

$$-2x+5$$

$$-(-2x-4)$$

$$9$$

Tomorrow

Simplify $\dfrac{\cancel{(x+2)}(x+3)}{\cancel{(x+2)}}$

$x+3 \quad [x \neq -2]$

9-10-19 4th Trig

$$7\overline{)232} \quad 33+\tfrac{1}{7}$$

$-21$

$22$

$-21$

$1$

$$6\overline{)261} \quad 43+\tfrac{3}{6}$$

$-24$

$21$

$18$

$3$

① $x+3\overline{)x^2+8x+1} \quad x+5+\tfrac{-14}{x+3}$

$-(x^2+3x)$

$5x+1$

$-(5x+15)$

$-14$

② $x+2\overline{)x^2+8x+2} \quad x+6+\tfrac{-10}{x+2}$

$-(x^2+2x)$

$6x+2$

$-(6x+12)$

$-10$

③ $x-4 \overline{)\, x^2-6x-1}$

$x-2+\frac{-9}{x-4}$

$-(x^2-4x)$

$-2x-1$

$-(-2x+8)$

$-9$

④ $x-1 \overline{)\, x^2+4x-5}$

$x+5$

$-(x^2-1x)$

$5x-5$

$-(5x-5)$

$0$

⑤ $x+2 \overline{)\, x^3+8}$

Rewrite $x+2 \overline{)\, x^3+0x^2+0x+8}$

$x^2-2x+4$

$-(x^3+2x^2)$

$-2x^2+0x$

$-(-2x^2-4x)$

$4x+8$

$-(4x+8)$

$0$

⑥ $x+3 \overline{)\, x^2+10}$

$$x-3+\frac{19}{x+3}$$

Rewrite as $x+3 \overline{)\, x^2+0x+10}$

$$-(x^2+3x)$$

$$-3x+10$$

$$-(-3x-9)$$

$$19$$

Tomorrow

$$\frac{(x+3)(x+2)}{x+2}$$

Simplifies to $x+3$ $[x \neq -2]$