

① $3x - 16 + 4x - 14 = 26$ } + post.
 $7x - 30 = 26$ } CLT
 $+30 +30$ } add. prop
 $7x = 56$ } Simplify
 $\frac{7x}{7} = \frac{56}{7}$ } \therefore prop
 $x = 8$ } simplify

② $x + 2 + x - 10 = 90$ } Compl.
 $2x - 8 = 90$ } CLT
 $+8 +8$ } add prop
 $\frac{2x}{2} = \frac{98}{2}$ } Simp.
 $x = 49$ } \therefore prop
 $\angle DFG = 49 + 2 = 51^\circ$
 $\angle JKL = 49 - 10 = 39^\circ$

③ \perp opp recip. $m = 2$
 $m = -\frac{1}{2}$ use
 $y = m(x - x_1) + y_1$ } pt. $(-9, 6)$
 $y = -\frac{1}{2}(x - 9) + 6$ } pt slope formula
 $y = -\frac{1}{2}(x + 9) + 6$ } -- is +
 $-6 -6$ } - prop
 $y - 6 = -\frac{1}{2}(x + 9)$ } Simp.

④ $(X_m = \frac{x_1 + x_2}{2}, Y_m = \frac{y_1 + y_2}{2})$ } Formula
 $\frac{8 + 6}{2}, \frac{2 + 10}{2}$ } Simplify
 $\frac{14}{2}, \frac{12}{2}$ }
 $(7, 6)$ }

$x - 4 = 65$ } Cor. \angle s
 $+4 +4$ } add prop
 $x = 69$

\triangle
 $\angle 1 + \angle 2 + \angle 3 = 180$ } Straight \angle
 $65 + 51 + \angle 3 = 180$ } add. prop
 $-65 -51$ } substitution
 $\angle 3 = \frac{-51}{-64}$ } subst. prop
 $y - 4 = 64$ } subst.
 $+4 +4$ } add prop
 $y = 68$ }

8

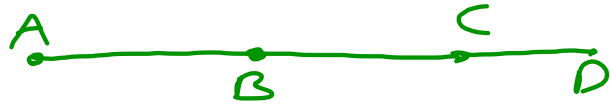
$$\begin{aligned} \angle 1 &= \angle 5 \\ 2x + 44 &= 5x + 38 \\ -2x - 38 & \quad -2x - 38 \\ \hline 6 &= 3x \\ \frac{6}{3} & \\ 2 &= x \\ x &= 2 \end{aligned}$$

pg. 2 test

Cor. \angle 's of \parallel .
 Subst.
 - prop =
 S. mb.
 \therefore prop =
 Sin
 Sym.

9

G: B midpt. of AC



C midpt. of BD

P: $AB = CD$

S	R
① B is midpt. of AC	Given
② $\overline{AB} \cong \overline{BC}$	Def of midpt.
③ C is midpt. of BD	Given
④ $\overline{BC} = \overline{CP}$	Def of midpt
⑤ $\overline{AB} \cong \overline{CP}$	Trans. prop
⑥ $AB = CD$	Def. of \cong seg.

(10)

$$\angle 1 = \angle 3$$

$$\frac{6x = 120}{6}$$

$$x = 20$$

Cor. \angle s

Subst.

\div prop

Simplify

p93
Test

(11)

// Same slope

$$y = -7x + 5 \quad m = -7$$

$(9, -5)$

$$y = m(x - x_1) + y_1$$

$$y = -7(x - 9) + 6$$

$$y = -7(x - 9) - 6$$

$$\begin{array}{r} +6 \\ +6 \end{array}$$

$$y + 6 = -7(x - 9)$$

add prop
=

(12)

$$5T = 7U$$

$$4x = 2x + 22$$

$$\begin{array}{r} -2x \\ -2x \end{array}$$

$$\frac{2x = 22}{2}$$

$$x = 11$$

Def midpt.

subt.

- prop =

Simp.

\div prop =

Simplify

(13)

$$x_m = \frac{x_1 + x_2}{2}$$

$$y_m = \frac{y_1 + y_2}{2}$$

$$9 = \frac{10 + x}{2}$$

$$8 = \frac{10 + y}{2}$$

$$\begin{array}{r} 18 = 10 + x \\ -10 \quad -10 \end{array}$$

$$\begin{array}{r} 16 = 10 + y \\ -10 \quad -10 \end{array}$$

$$8 = x$$

$$6 = y$$

$(8, 6)$

x prop =

sub + prop =

(18)

pg. 4
T=5^r

$$\begin{aligned} L_1 + L_2 &= 180 \\ x - 38 + x + 96 &= 180 \\ 2x + 58 &= 180 \\ -58 \quad -58 \\ \hline 2x &= 122 \\ \quad 2 \\ x &= 61 \end{aligned}$$

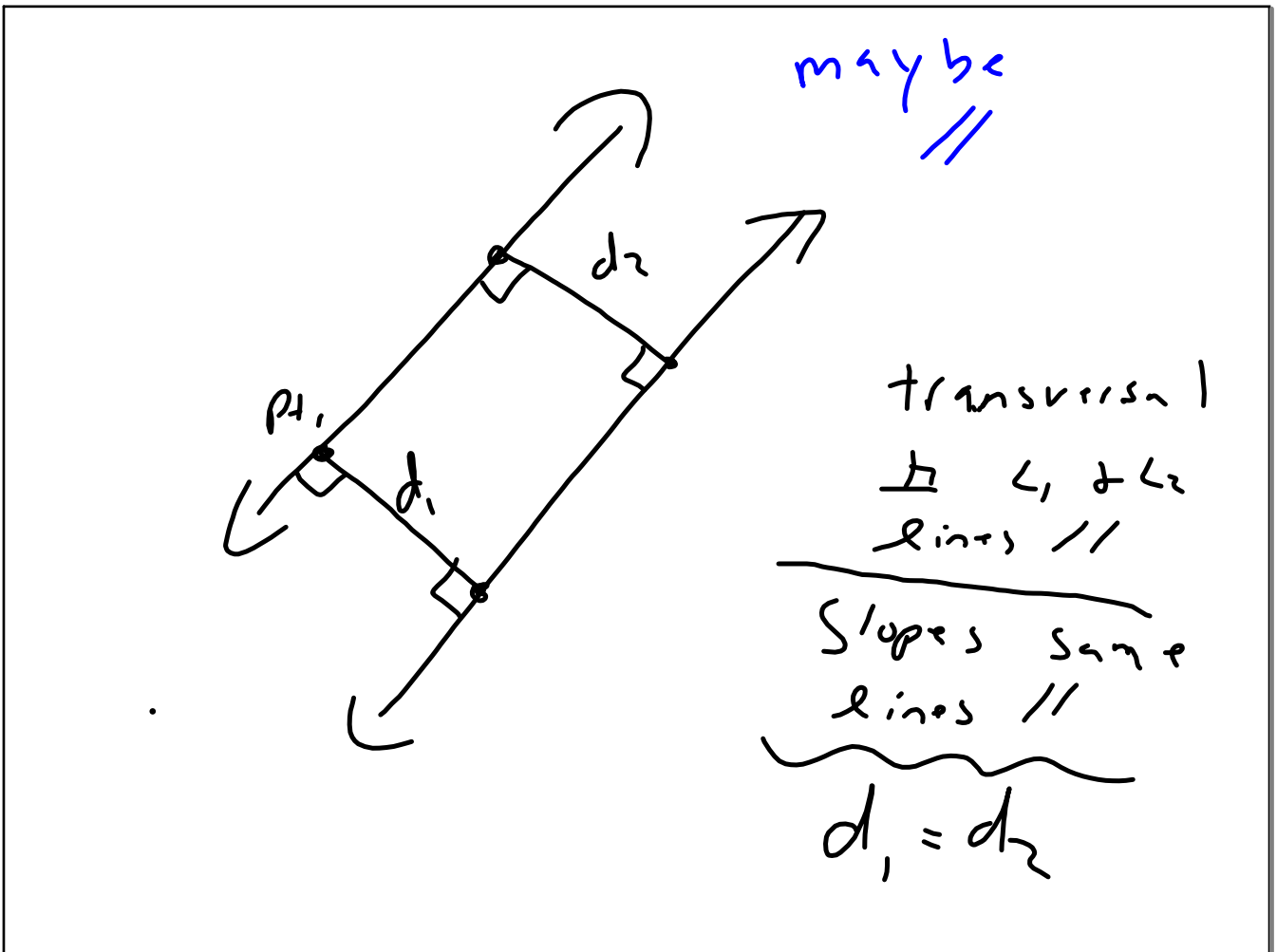
Subst.
Subst.
CLT
- simp =
∴ simp =

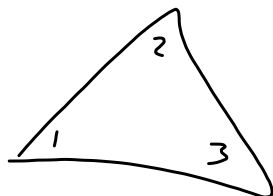
$$\begin{aligned} L_1 &= 61 - 38 = 23 \\ L_2 &= 61 + 96 = 157 \end{aligned}$$

$$\begin{aligned} L_1 + L_2 &= WT \\ 3x + 25 + 3x + 25 &= 7x \\ 6x + 50 &= 7x \\ -6x \quad -6x \\ 50 &= x \\ x &= 50 \end{aligned}$$

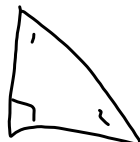
add simp.
Subst.
CLT
- simp =
simp!
Sym.

$$\begin{aligned} n \angle DBC &= 3(50) + 25 \\ m \angle DBC &= 150 + 25 \\ &= 175 \end{aligned}$$





$$\angle 1 + \angle 2 + \angle 3 = 180$$

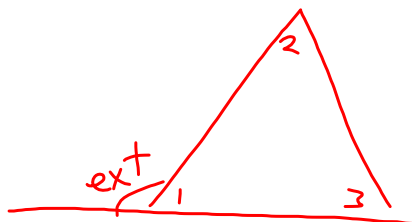


$$\angle 1 + \angle 2 + 90 = 180$$

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

Largest \angle s faces largest side

Smallest " " Smallest side



$$\angle 1 + \angle 2 + \angle 3 = 180$$

$$\angle 1 + \text{ext} \angle = 180$$

$$\angle 1 + \angle 2 + \angle 3 = \angle 1 + \text{ext} \angle$$

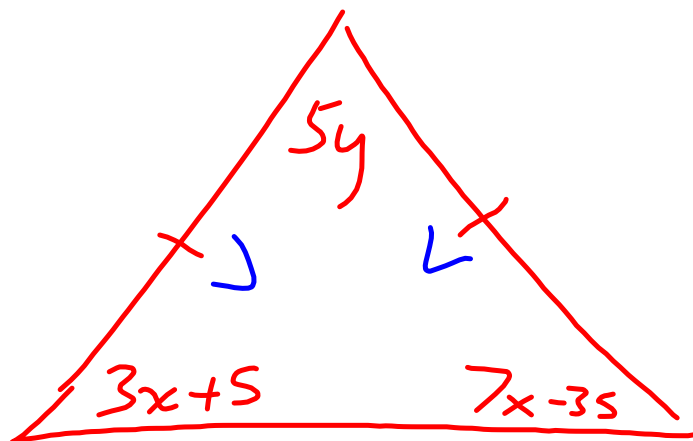
$$\begin{array}{r} -\angle 1 \quad -\angle 1 \\ \hline \end{array}$$

$$\angle 2 + \angle 3 = \text{ext} \angle$$

$$\underline{\underline{\text{ext} \angle = \angle 2 + \angle 3 \text{ Sym.}}}$$

Sum of \angle s of $\Delta + 180$
 Linear Pair
 Subst.
 (-) Prop

ext \angle of Δ = sum of 2 nonadjacent \angle s in Triangle

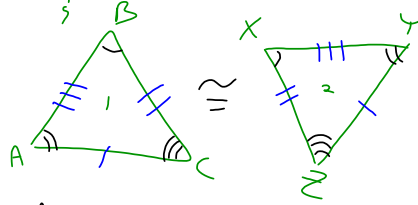


Same measurement \angle 's

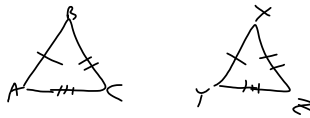
$$3x+5 = 7x-35$$

C P C T C

$\begin{matrix} \text{C} & \text{P} & \text{C} & \text{T} & \text{C} \\ \text{C} & \text{P} & \text{C} & \text{T} & \text{C} \\ \text{C} & \text{P} & \text{C} & \text{T} & \text{C} \\ \text{C} & \text{P} & \text{C} & \text{T} & \text{C} \\ \text{C} & \text{P} & \text{C} & \text{T} & \text{C} \end{matrix}$

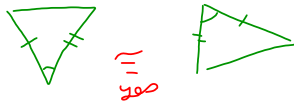


$\triangle ABC \cong \triangle YXZ$



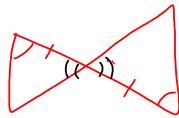
SSS SAS

ASA



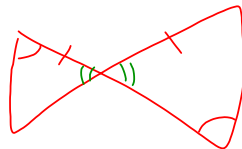
$S_1 A_1 S_2$

$S_1 A_1 S_2$

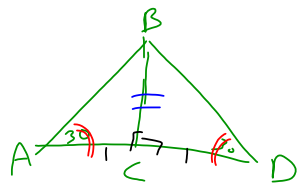


$A_1 S_1 A_2$

$A_1 S_1 A_2$



$A_1 S_1 A_2 \cdot A_2$



BC is bisector AD

$A_1 S_1 A_2$

$A_2 S_1 A_2$

$S_1 A_1 S_2$

$S_1 A_1 S_2$