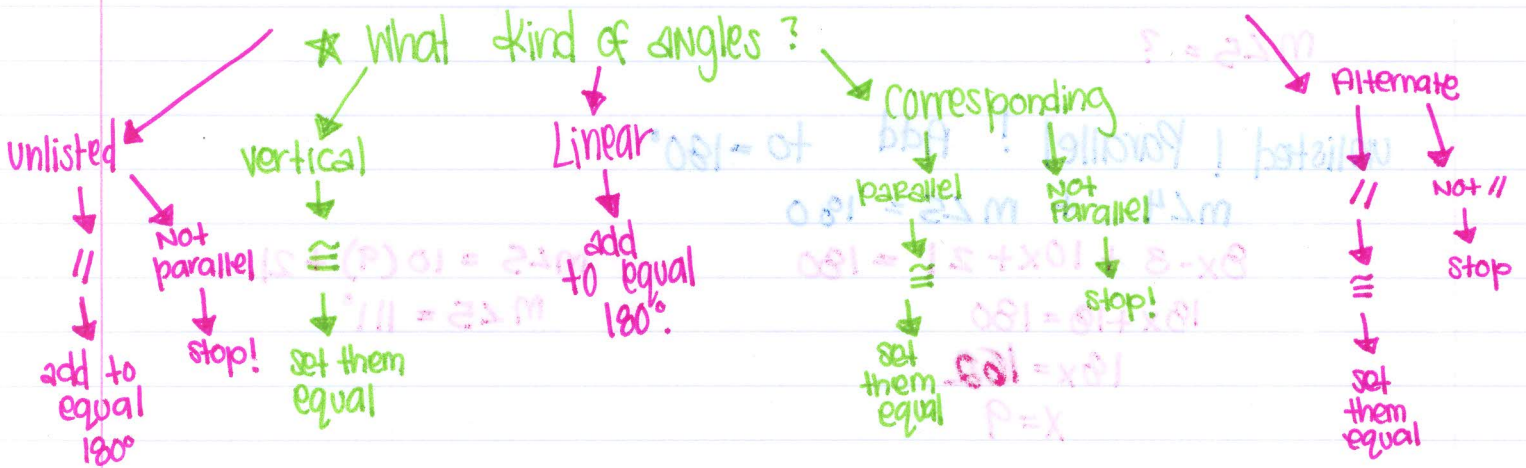


3-2 Solving Angles on Transversals

I. Steps to Solve



px

$x = ?$

parallel; \cong !

alternate; (exterior)

$$87 = x$$

$$x = 87^\circ$$

ex

$(4x+20)^\circ$

$(5x-5)$

determine measure of angles!

alternate; parallel; \cong (exterior)

$$5x - 5 = 4x + 20$$

$$x - 5 = 20$$

$$x = 25$$

$$4(25) + 20$$

$$100 + 20$$

$$= 120^\circ$$

ex

$x = ?$

Corresponding Not PARALLEL

Can't do it, Not possible!

ex

m

n

t

$m \parallel n$

$$m\angle 1 = (5x + 60)^\circ$$

$$m\angle 2 = (5x - 20)^\circ$$

$$m\angle 1 = ?$$

unlisted. Lines // $t = 180$

$$m\angle 1 = (5)(14) + 60 = 70 + 60 = 130^\circ$$

$$5x + 60 + 5x - 20 = 180$$

$$10x + 40 = 180$$

$$10x = 140$$

$$x = 14$$

$p \perp q$ & $\angle 4$ & $\angle 5$ are same side interior angles.

on line p & q . $p \parallel q$.

$$m\angle 4 = (8x - 3)^\circ \quad \& \quad m\angle 5 = (10x + 21)^\circ$$

$$m\angle 5 = ?$$

unlisted! Parallel! Add to $= 180^\circ$

$$m\angle 4 + m\angle 5 = 180$$

$$8x - 3 + 10x + 21 = 180$$

$$18x + 18 = 180$$

$$18x = 162$$

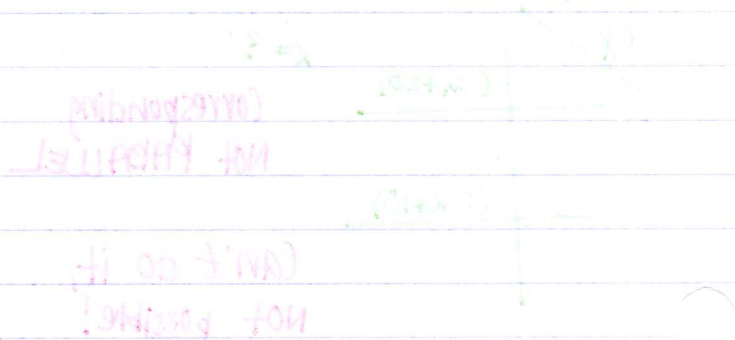
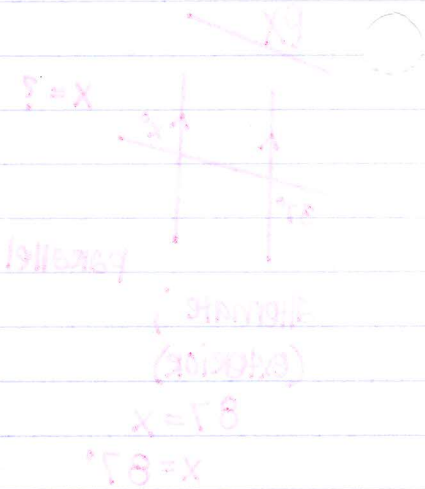
$$x = 9$$

$$m\angle 5 = 10(9) + 21$$

$$m\angle 5 = 111^\circ$$

$$\begin{aligned} 8x + 50 &= (2x) + 50 \\ 8x + 50 &= 100 + 50 \\ 8x &= 150 \end{aligned}$$

$$\begin{aligned} 8x + 50 &= 2x + 50 \\ 8x - 2x &= 50 - 50 \\ 6x &= 0 \\ x &= 0 \end{aligned}$$



$$\begin{aligned} 10x + 40 &= 180 \\ 10x &= 140 \\ x &= 14 \end{aligned}$$

$$\begin{aligned} 8x + 50 &= 2x + 50 \\ 8x - 2x &= 50 - 50 \\ 6x &= 0 \\ x &= 0 \end{aligned}$$

NOT PARALLEL!