

Day 2 - Transversals & Parallel Lines

I.

① a) \overline{AD} , \overline{BO} and \overline{BD}
or \overline{AB} , \overline{CD} , \overline{BD}

b) same lines for $\angle 1$ and $\angle 2$

② No.

II.

[Corresponding]
① $2x + 40 = 3x + 20$
 $20 = x$

$$m\angle 3 = 2(20) + 40 = 80$$

[Alt Int]
② $x = 4x + 21$
 $-3x = 21$
 $x = -7$

$$m\angle 7 = 4(-7) + 21 = -7$$

or

$$m\angle 7 = (-7)$$

same
measure
as $\angle 3$ & $\angle 5$
↑ ↑
Corresponding vertical

* Quiz & Test will not have neg #'s *

[Same-side Interior]

$$(3) \quad 4x - 10 + 2x - 20 = 180$$

$$6x - 30 = 180$$

$$\frac{6x}{6} = \frac{210}{6}$$

$$x = 35$$

$$m\angle 4 = m\angle 6 = m\angle 8 = 2(35) - 20 = \boxed{50}$$

$$(4) \quad 3x + 40 + 2x = 180$$

$$5x + 40 = 180$$

$$5x = 140$$

$$\boxed{x = 28}$$

$$m\angle 5 = m\angle 7 = m\angle 1 = 2(28) = \boxed{56}$$

(5) Repeat!

$$m\angle 1 = \boxed{56}$$