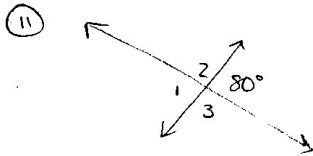5-9-17

Aim:  SWBAT use angle relationships to determine the measure of angles.

Do Now: Top half of WS

HW:  Quiz tomorrow
       Final Review Packet due June 2
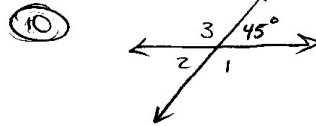
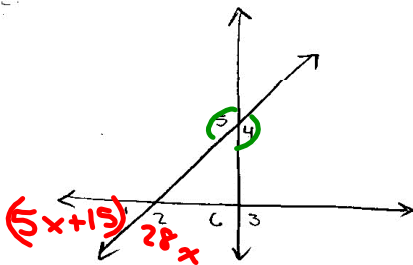## Pg. 406 – 407 # 1-9, 14-15, 21 - 23

Pg. 406 # 1-11, 21-27

(11)

∠1 = 80° because vertical ∡'s are always ≅

∠2 = 100° because it's supp. to the given angle.

∠3 = 100° because it's supp. to the given angle.

**Pg. 407**

(10)

∠1 = 135° because it is supp. to the given angle.

∠2 = 45° because vertical angles are always ≅

∠3 = 135° because it is supp. to the given angle.

(15) $m\angle 6 - (100-10y)°$ and $m\angle 3 = 45y°$

$100 - 10y + 45y = 180$

$35y + 100 = 180$ ← combine like terms

$\phantom{35y} -100 \quad -100$

$\dfrac{35y}{35} = \dfrac{80}{35}$

$y = \dfrac{80}{35} = \dfrac{16}{7}$ ← keep as a fraction

$(5x+15)$ $28x$

(24) $m\angle 1 = (5x+15)°$ and $m\angle 2 = 28x°$

$5x + 15 + 28x = 180°$ ← This is the equation because they are supp angles.

$33x + 15 = 180$

$\phantom{33x} -15 \quad -15$

combine like terms

$\dfrac{33x}{33} = \dfrac{165}{33}$

$x = 5°$

$5x + 15 = 40°$

$28x = 140°$

$100 - 10y \qquad 45y$

$100 - 10\left(\dfrac{16}{7}\right) \qquad 45\left(\dfrac{16}{7}\right)$

$77\dfrac{1}{7}° \qquad 102\dfrac{6}{7}°$

✱ (26) $m\angle 4 = (7n+39)°$ and $m\angle 5 = (11n-13)°$

$7n + 39 = 11n - 13$ ← vertical ∡'s are always ≅

$-7n \phantom{+39} -7n$

$39 = 4n - 13$

$+13 \phantom{=4n} +13$

$\dfrac{52}{4} = \dfrac{4n}{4}$

$13 = n$

$7n + 39 = 130°$

$11n - 13 = 130°$

*line AD*   *line BE*   *line CF*       Line AD

Three lines, $\overleftrightarrow{AD}$, $\overleftrightarrow{BE}$, and $\overleftrightarrow{CF}$ intersect at point $O$ as shown in the diagram. $\overleftrightarrow{AD}$ is perpendicular to $\overleftrightarrow{FC}$. $\angle EOD$ measures 32°. What is the measure of $\angle AOB$?   $32°$
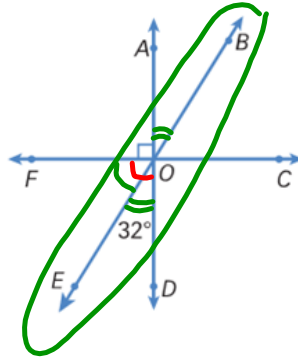
1. Name a right angle.    $\angle AOF$

2. Angle FOE and ‹EOD are **adjacent** and **complementary**.

3. Name a segment on line EB.   $\overline{OB}, \overline{OE}$

4. Name a ray with endpoint F.   $\overrightarrow{FO}, \overrightarrow{FC}$

$\overline{EB}$

Sides $\overline{AD}$ and $\overline{CD}$ of trapezoid $ABCD$ are extended as shown. The measures of angles $\angle CDE$ and $\angle EDF$ respectively are $(2x + 1)°$ and $(x - 7)°$. Find the measure of $\angle ADC$.

$2x + 1 + x - 7 = 180$

$3x - 6 = 180$
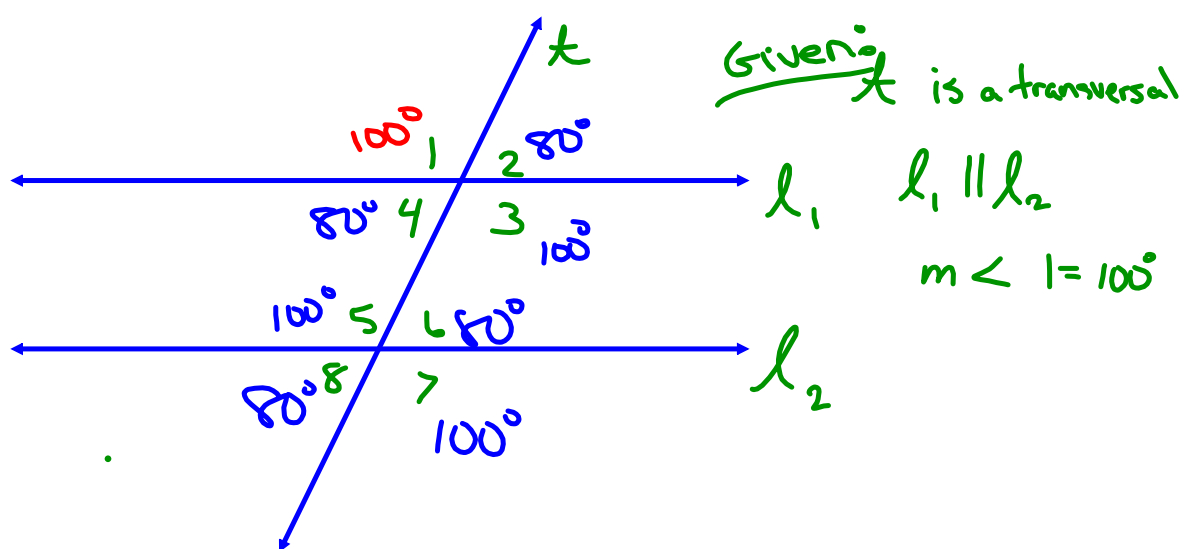
$\underline{\phantom{3x} + 6 \phantom{==} + 6}$

$\dfrac{3x}{3} = \dfrac{186}{3}$

$x = 62$

$x - 7$

$62 - 7$

$\boxed{55°}$

$t$

Given $t$ is a transversal

$100°$ 1 | 2 $80°$

$80°$ 4 | 3 $100°$

$l_1$   $l_1 \parallel l_2$

$m\angle 1 = 100°$

$100°$ 5 | 6 $80°$

$80°$ 8 | 7

$l_2$

$100°$
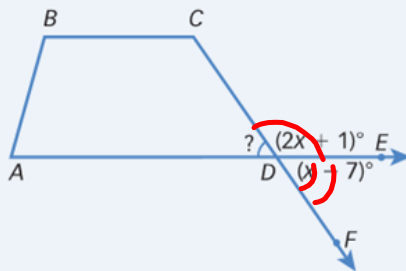
What are the measures of angles 5, 6, 7, and 8?

Find all the angle measures.

$t$

$105°$ $75°$
1 2
$l_1$
$75°$ 3 4 $105°$
$105°$ 5 6 $75°$
$l_2$
$75°$ 7 8
$105°$
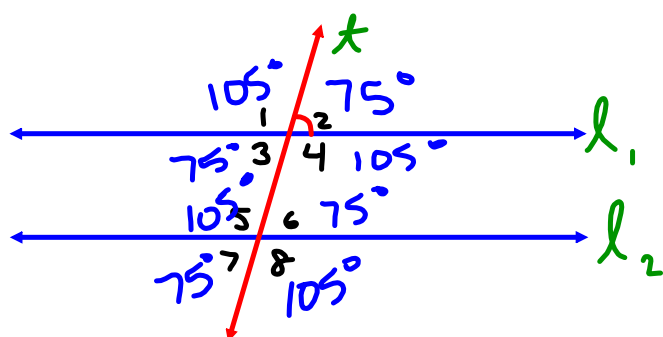
Given: — parallel

$l_1 \parallel l_2$

$t$ is a transversal

$m\angle 2 = 75°$

Find all the angle measures.

$t$

115°1 / 2 65°
65°4 / 3 115°

115° 5 / 6 65°
65° 8 / 7 115°

$\ell_1$

$\ell_2$

Given: — parallel

$\ell_1 \parallel \ell_2$

$t$ is a transversal

$m\angle 3 = 115°$