Practice Worksheet for Lesson 3-2 and 3-3

Name:
Mailbox #: Key

In each exercise some information is given. Use this information and the diagram provided to name the segments that must be parallel. If there are no such segments, write *none*.

1) $\angle 2 \cong \angle 9$ $\overline{FC} \parallel \overline{AB}$

2) $\angle 6 \cong \angle 7$ $\overline{CD} \parallel \overline{FE}$

3) $m\angle 1 = m\angle 8 = 90°$ $\overline{AB} \parallel \overline{FC}$

4) $\angle 5 \cong \angle 9$ $\overline{EC} \parallel \overline{FB}$

5) $m\angle 2 = m\angle 5$ none

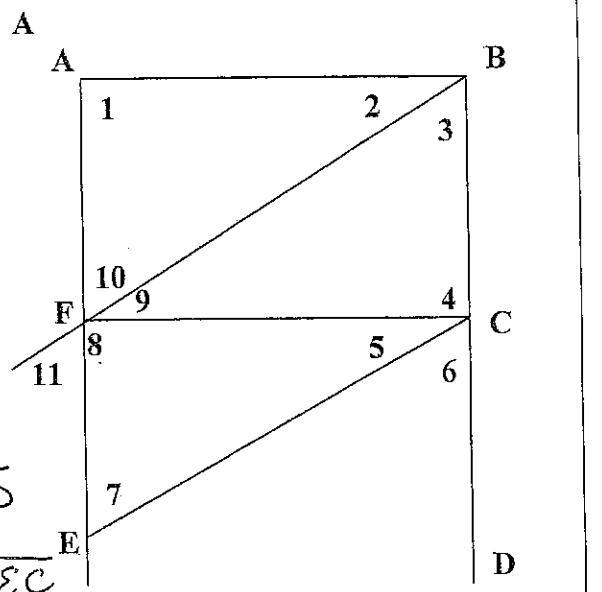
charge * 6) $\angle 3 \cong \angle 10$ $\overline{BC} \parallel \overline{AF}$

7) $\overline{FC} \perp \overline{AE}$ and $\overline{FC} \perp \overline{BD}$ $\overline{AE} \parallel \overline{BD}$

8) $m\angle 5 + m\angle 6 = m\angle 9 + m\angle 10$ $\overline{AE} \parallel \overline{BD}$

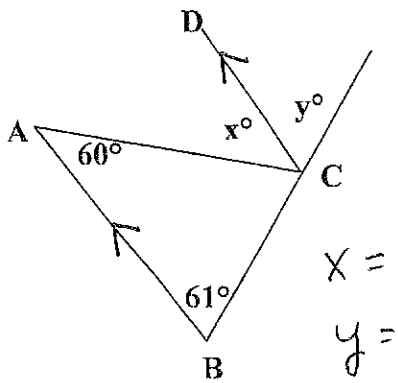
9) $\angle 7$ and $\angle EFB$ are supplementary $\overline{FB} \parallel \overline{EC}$

10) $m\angle 7 = m\angle 3 = m\angle 10$ $\overline{AE} \parallel \overline{BD}$



Solve for all the unknown variables.

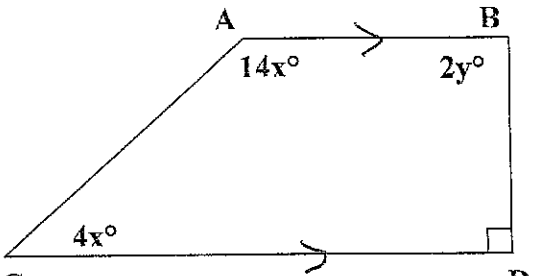
1) line AB || line DC



$x = 60°$

$y = 61°$

2) line AB || line CD



$4x + 14x = 180$

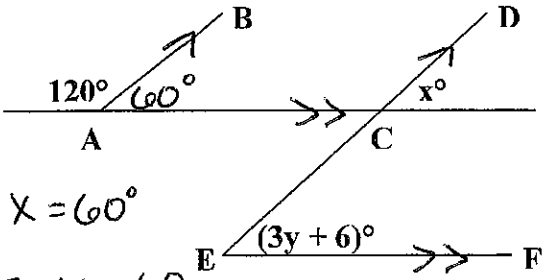
$18x = 180$

$x = 10$

$2y = 90$

$y = 45$

3) line AB || line CD and line AC || line EF



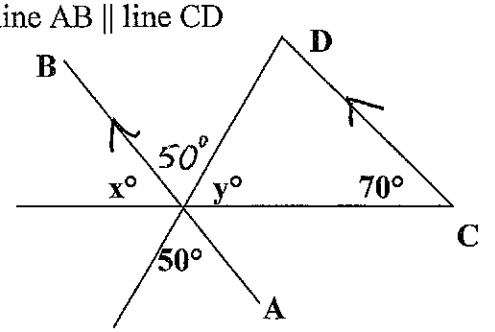
$X = 60°$

$3y + 6 = 60$

$3y = 54$

$y = 18$

4) line AB || line CD

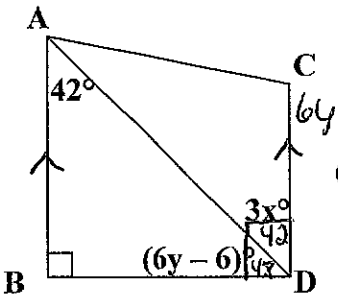


$X = 70$ $y = 60$

5) line AB || line CD

$3x = 42$

$x = 14$

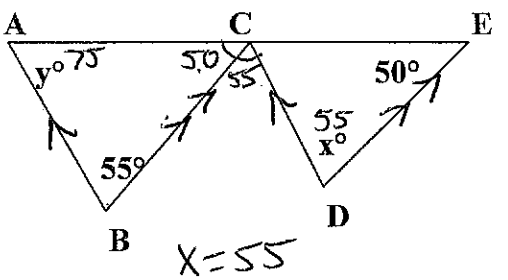


$6y - 6 = 48$

$6y = 54$

$y = 9$

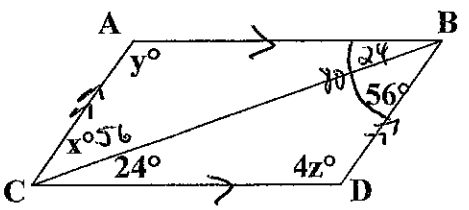
6) line AB || line CD and line BC || line DE



$X = 55$

$y = 75$

7) line AB || line CD and line AC || line BD



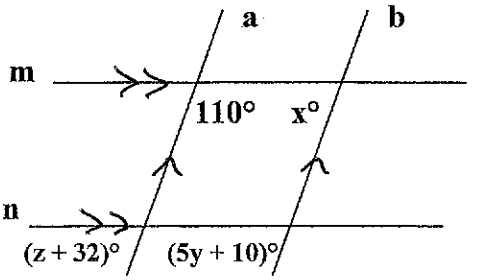
$X = 56$

$4z = 100$

$z = 25$

$y = 100$

8) a || b and m || n



$X = 70$

$5y + 10 = 70$

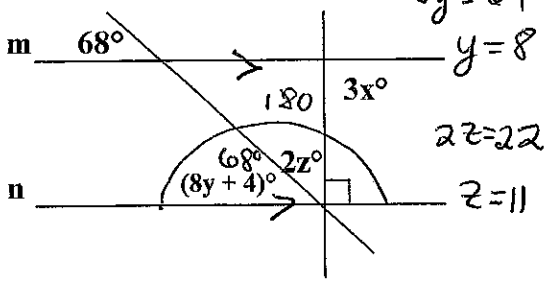
$5y = 60$

$y = 12$

$z + 32 = 70$

$z = 38$

9) m ∥ n

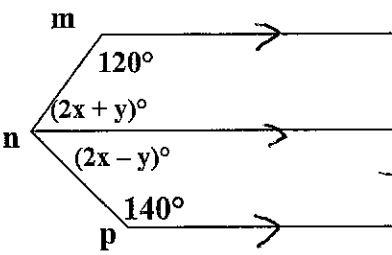


$3x = 90$
$x = 30$

$8y + 4 = 68$
$8y = 64$
$y = 8$

$2z = 22$
$z = 11$

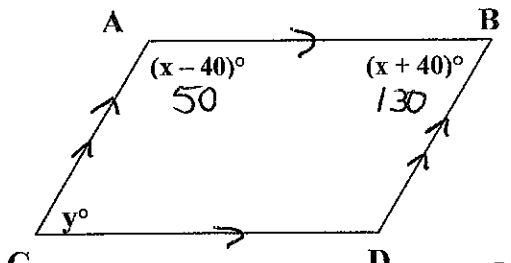
10) m ∥ n ∥ p



$2x + y + 120 = 180$
$2x - y + 140 = 180$
$2x + y = 60$
$+ \; 2x - y = 40$
$4x = 100$
$x = 25$
$y = 10$

Find the values of x and y that would make:

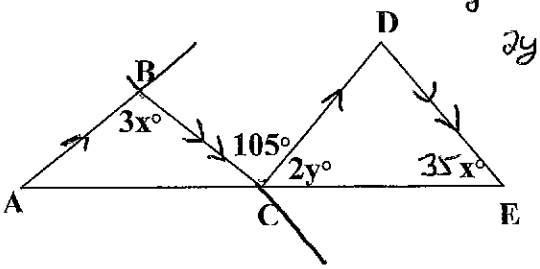
11) $\overline{AB} \parallel \overline{CD}$ and $\overline{AC} \parallel \overline{BD}$



$x - 40 + x + 40 = 180$
$2x = 180$
$x = 90$

$y = 130$

12) $\overline{AB} \parallel \overline{CD}$ and $\overline{BC} \parallel \overline{DE}$

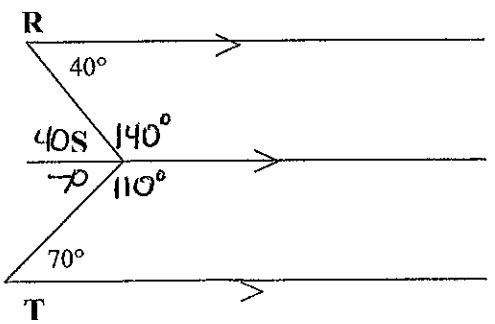


$3x = 105$
$x = 35$

$2y + 105 + 35 = 180$
$2y + 140 = 180$
$2y = 40$
$y = 20$

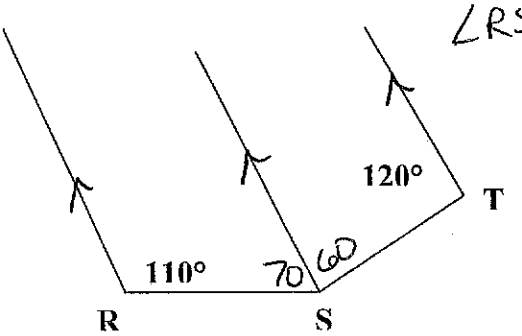
Find the measure of < RST.

13)



$\angle RST = 110°$

14) the three lines coming from R, S, and T are all parallel



$\angle RST = 130°$