

For exercises 1-4, use the diagram to name each of the following.

1. Name 4 segments parallel to plane $ABCF$.

$\overline{ED}, \overline{DH}, \overline{EG}, \overline{GH}$

never touch

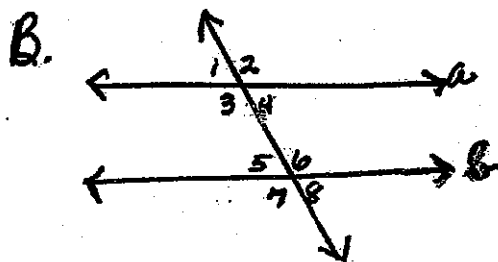
2. Name 4 segments perpendicular to plane $HDCB$.

$\overline{ED}, \overline{GH}, \overline{AB}, \overline{FC}$

Intersect at right \angle

3. ~~Name all segments skew to plane $AGHB$.~~ 4. Name a plane parallel to plane $GEDH$.

$ABCF$



For exercises 5-8, use the diagram to answer the following.

5. What kind of angles are $\angle 3$ and $\angle 7$?

Corresponding

6. Identify a pair of same-side interior angles.

$\angle 3$ and $\angle 5$
 $\angle 4$ and $\angle 6$

7. Name 3 pairs of corresponding angles.

$\angle 3$ and $\angle 7$
 $\angle 5$ and $\angle 1$
 $\angle 2$ and $\angle 6$
 $\angle 4$ and $\angle 8$

8. If $\angle 1$ measures 68° , what is the sum of the measures of $\angle 5$ and $\angle 8$? (assuming lines "a" and "b" are parallel!)

$\angle 1 \cong \angle 5$ b/c $\angle 5 \cong \angle 8$ b/c vertical \angle s

$\angle 5 = 68^\circ$
 $\angle 8 = 68^\circ$

$68 + 68 = 136^\circ$

9. Line "a" is parallel to line "b" and $m\angle 7 = 138^\circ$. Find $m\angle 1$.

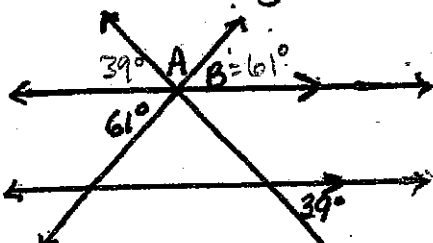
$\angle 7 \cong \angle 3$ b/c $\angle 3 \cong \angle 1$ $\Rightarrow \angle 3 = 138$

$\angle 1 + \angle 3 = 180$ b/c linear pair supp

$\angle 1 + 138 = 180$
 $-138 \quad -138$
 $\hline \angle 1 = 42^\circ$

C. Use the diagram below to find $m\angle A$.

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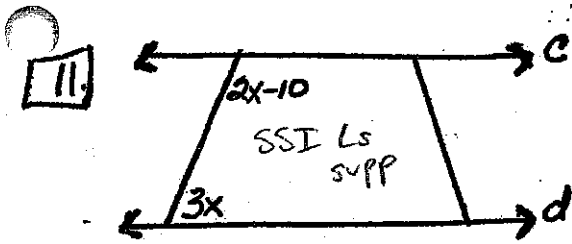


$m\angle A = 80^\circ$

$39 + A + 61 = 180$

$A + 100 = 180$
 $-100 \quad -100$

D. Find the value of "x" for each problem.



Given c || d. $x = \underline{38}$

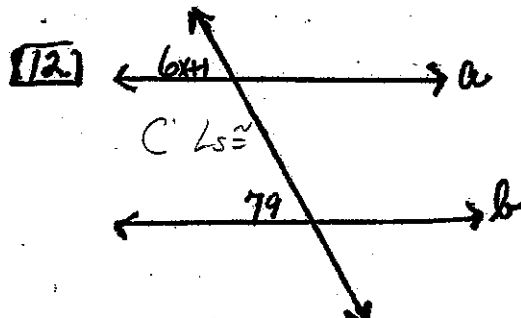
$$2x - 10 + 3x = 180$$

$$5x - 10 = 180$$

$$+10 \quad +10$$

$$\frac{5x}{5} = \frac{190}{5}$$

$$x = 38$$



Given: a || b

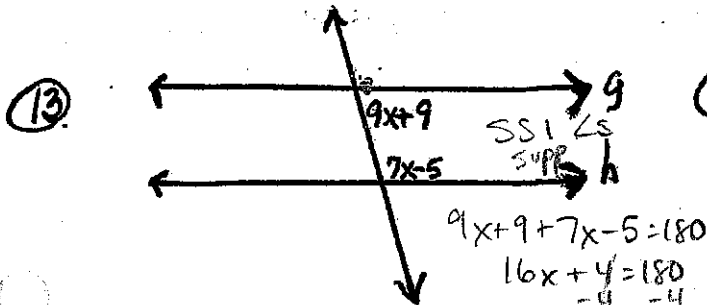
$$x = \underline{13}$$

$$6x + 1 = 79$$

$$\frac{6x}{6} = \frac{78}{6}$$

$$x = 13$$

E. Find the value of "x" for which g || h.



14.

$$9x + 9 + 7x - 5 = 180$$

$$16x + 4 = 180$$

$$-4 \quad -4$$

$$\frac{16x}{16} = \frac{176}{16}$$

$$x = 11$$

$$x + 95 = 4x - 10$$

$$-x \quad -x$$

$$95 = 3x - 10$$

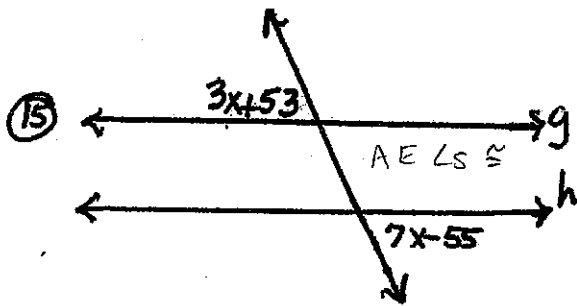
$$+10 \quad +10$$

$$\frac{105}{3} = \frac{3x}{3}$$

$$35 = x$$

$$x = \underline{11}$$

$$x = \underline{35}$$



$$x = \underline{27}$$

$$3x + 53 = 7x - 55$$

$$-3x \quad -3x$$

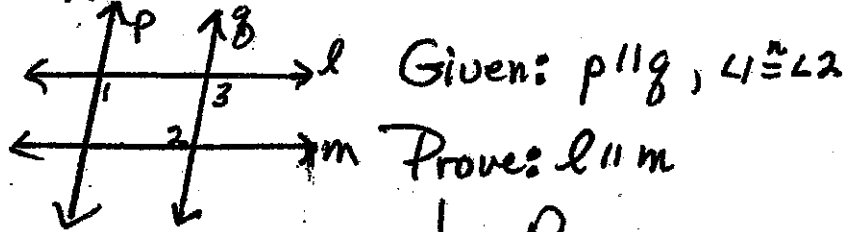
$$53 = 4x - 55$$

$$+55 \quad +55$$

$$\frac{108}{4} = \frac{4x}{4}$$

$$27 = x$$

F. Fill in the blanks to solve the proof below



Given: $p \parallel q$, $\angle 1 \cong \angle 2$

Prove: $l \parallel m$

Statement	Reason
1. $p \parallel q$, $\angle 1 \cong \angle 2$	1. Given
2. $\angle 1 \cong \angle 3$	2. If C Ls of lines, the $\angle s \cong$.
3. $\angle 3 \cong \angle 2$	3. Transitive Prop
4. $l \parallel m$	4. If AI Ls \cong , then