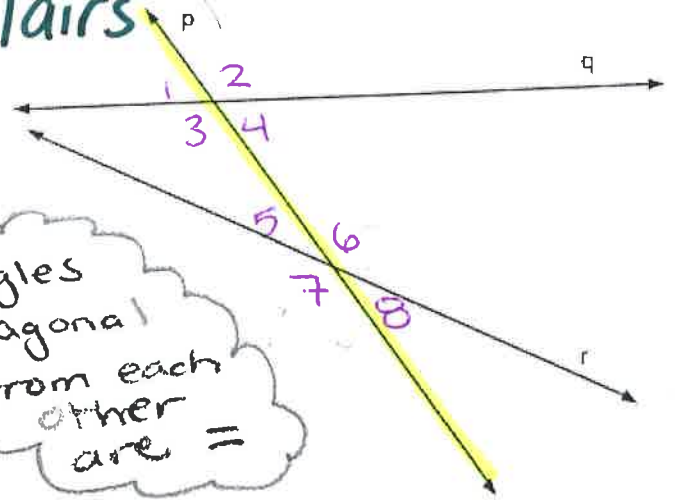
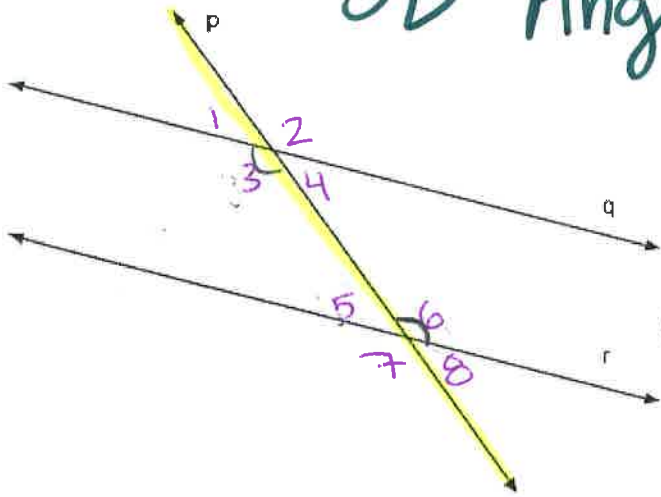


3B: Angle Pairs



angles diagonal from each other are =

Parallel lines: never touch/intersect
Ex: lines r & q

Skew lines: intersect
Ex: r & q

Transversal:

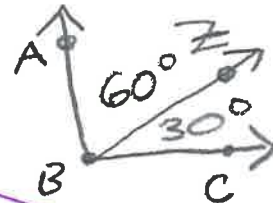
Transversal:

intersects a pair of lines, ex: line p

supplementary \angle s
add to 180° (straight line)

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

complementary \angle s
add to 90°



alternate interior \angle s
 $\angle 3 \cong \angle 6$ $\angle 4 \cong \angle 5$

alternate exterior \angle s
 $\angle 2 \cong \angle 7$ $\angle 1 \cong \angle 8$

in parallel lines,
equal to each other

in parallel lines,
equal

corresponding \angle s

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

in parallel lines,
equal

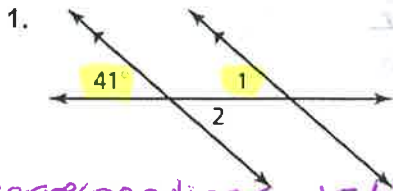
consecutive \angle s
or

same-side interior \angle s
 $\angle 3 \cong \angle 5$ $\angle 4 \cong \angle 6$

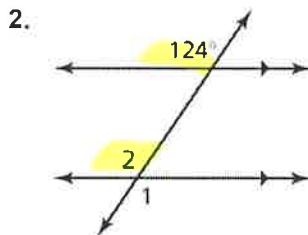
add to 180°
(a line)

3B Practice

In Exercises 1 and 2, find $m\angle 1$ and $m\angle 2$. Tell which theorem you used in each case.

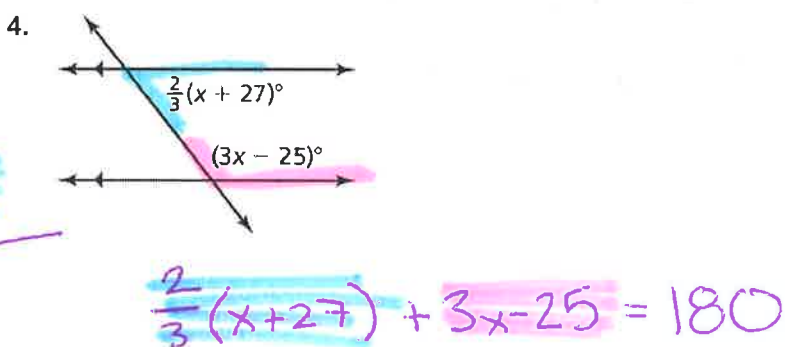
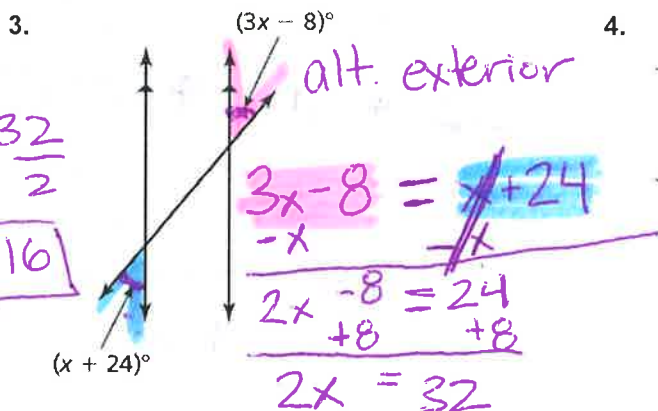


corresponding - $1 = 41^\circ$
alt interior - $2 = 41^\circ$

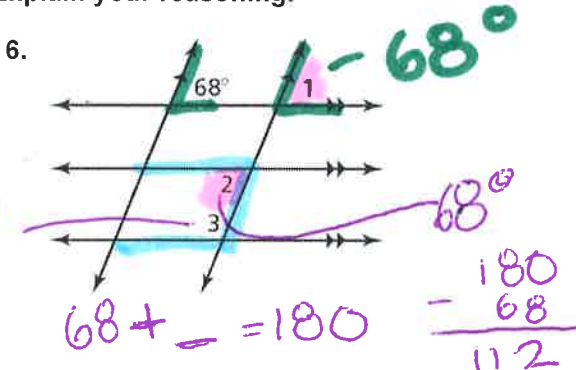
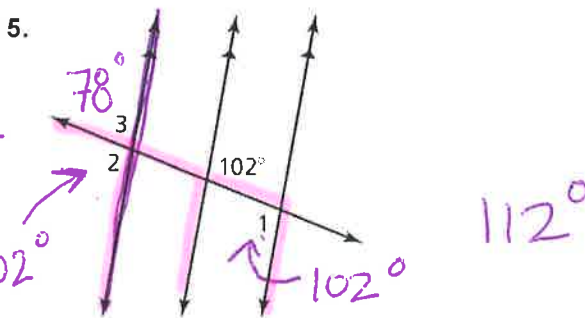


corresponding
 $\angle 2 = 124^\circ$
 $\angle 1 = 124^\circ$
Vertical \angle s

In Exercises 3 and 4, find the value of x . Show your steps.



In Exercises 5 and 6, find $m\angle 1$, $m\angle 2$, and $m\angle 3$. Explain your reasoning.



8. The figure shows three pairs of parallel lines. Which angles are congruent to $\angle 1$? Tell which theorem you used in each case.

