

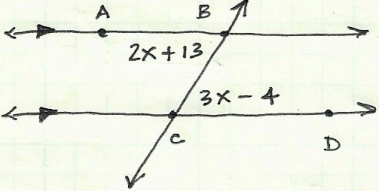
SRHS - Math I

Parallel Lines / Angle Pairs - Notes

- When a pair of lines are intersected by a third line (that we call a transversal), there are several kinds of angle pairs formed. Hopefully you got to work on this in class by playing Dance-Dance-Transversal. Here are the theorems we worked with: *If two parallel lines are cut by a transversal, then the formed...*

- ...Corresponding Angles are *Congruent*.
- ...Alternate Interior Angles are *Congruent*.
- ...Alternate Exterior Angles are *Congruent*.
- ...Consecutive Interior (sometimes called Same-side Interior) angles are *Supplementary*.

Find the measure of $\angle ABC$

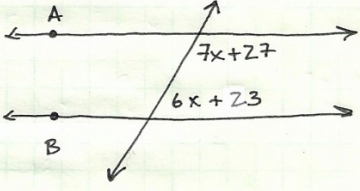


line A and line D are given as parallel, so the alternate interior angles formed are congruent.

$$2x + 13 = 3x - 4$$
$$17 = x$$
$$m\angle ABC = 2(17) + 13$$
$$= 47^\circ$$

- The converse of each of these theorems is also true: *If two lines are cut by a transversal and the formed...*
 - ...Corresponding Angles are *Congruent*, then the lines are parallel.
 - ...Alternate Interior Angles are *Congruent*, then the lines are parallel.
 - ...Alternate Exterior Angles are *Congruent*, then the lines are parallel.
 - ...Consecutive Interior (sometimes called Same-side Interior) angles are *Supplementary*, then the lines are parallel.

Find the value of x that makes lines A and B parallel



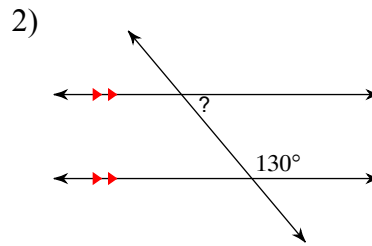
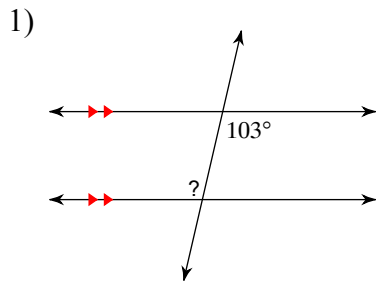
The labeled angles are consecutive interior, so they must be supplementary in order for lines A and B to be parallel

$$(7x + 27) + (6x + 23) = 180$$
$$13x + 50 = 180$$
$$13x = 130$$
$$x = 10$$

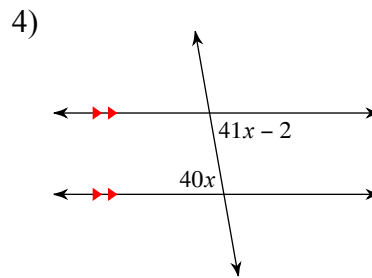
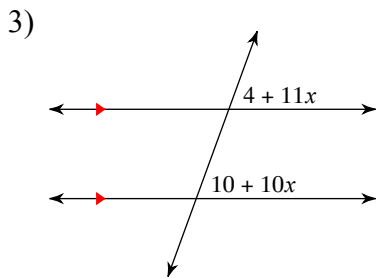
- To review this topic in more detail, consult your textbook and see pages 500, 504, 510-511 and the examples that follow.

SRHS Math 1

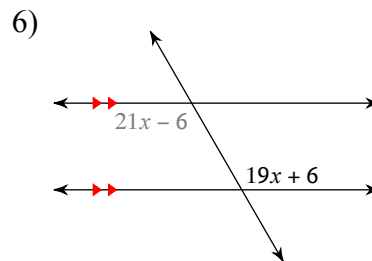
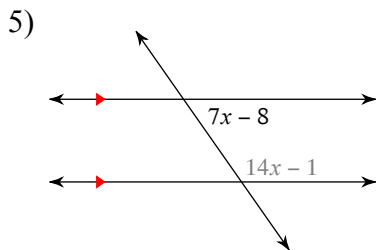
Find the measure of each angle indicated.



Solve for x .



Find the measure of the angle indicated in bold.



Find the value of x that makes lines u and v parallel.

