

Names Key

Date _____ Hr _____

Under Construction

Part A

Elms 3mi

Miller 6mi

Walnut St (Added for D)

$90 + 32 = 122^\circ$
 $180 - 122 = 58^\circ$

Part B

$$3^2 + 6^2 = c^2$$
$$9 + 36 = c^2$$
$$\sqrt{45} = \sqrt{c^2}$$

$c = 6.7 \text{ mi}$

Part C

$6 + 3 = 9$	$6.7 \cdot 2$	$\frac{90}{25} = 3.6$ gallons a week
$9 \cdot 2 = 18$	$13.4 \cdot 5 = 67$	
$18 \cdot 5 = 90$	After the Highway is built	$\frac{67}{25} = 2.68$ gallons a week
Originally 90 miles a wk	67 miles a wk	Saves 0.92 gallons a week
		<u>0.9 gallons</u>

Part D

No, using what I know about Supplementary & Corresponding angles I can see the measurements at the intersections are $148^\circ + 32^\circ$ so they don't meet the 150° minimum.

$180 - 148 = 32$