

~~HW 89~~
HW 90

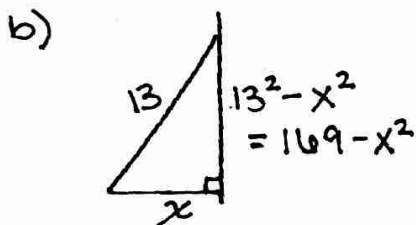
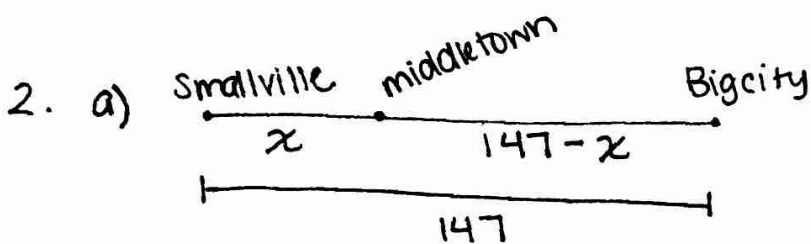
Distance Formula

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

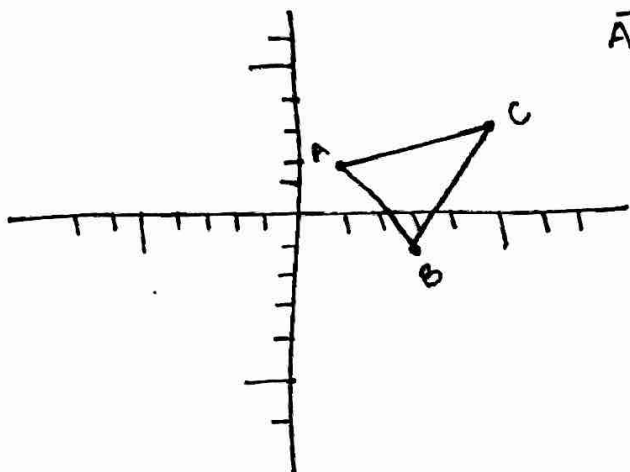
1. a) $d = \sqrt{(5-2)^2 + (11-7)^2}$
 $= \sqrt{9 + 16}$
 $= \sqrt{25}$
 $= 5$

b) $d = \sqrt{(2 - -3)^2 + (-5 - -1)^2}$
 $= \sqrt{25 + 16}$
 $= \sqrt{41}$

c) $d = \sqrt{(c-a)^2 + (d-b)^2}$



3.



$$\overline{AB} = \sqrt{(3-1)^2 + (-1-2)^2}$$
$$= \sqrt{4 + 9}$$
$$= \sqrt{13}$$

$$\overline{AC} = \sqrt{(5-1)^2 + (3-2)^2}$$
$$= \sqrt{16 + 1}$$
$$= \sqrt{17}$$

$$\overline{BC} = \sqrt{(5-3)^2 + (3+1)^2}$$
$$= \sqrt{4 + 16}$$
$$= \sqrt{20} = 2\sqrt{5}$$

a) \overline{BC} is the longest

b) $P = \sqrt{13} + \sqrt{17} + 2\sqrt{5}$
 $P \approx 12.2$