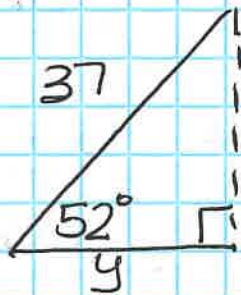


homework 6-55 to 6-60

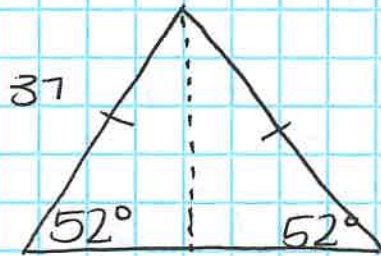
6-55

a) ~~minimize~~



$$\cos 52 = \frac{y}{37}$$

$$y \approx 22.78$$

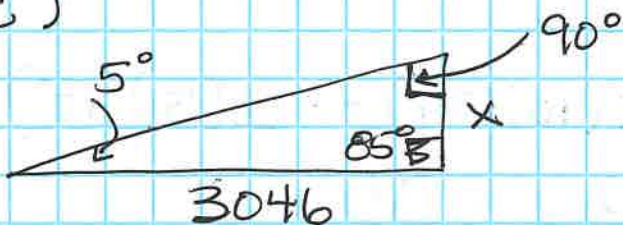


$$x = 2(y)$$

$$x \approx 45.56$$

b) can't do

c)



~~Sin 50~~

$$\sin 5^\circ = \frac{x}{3046}$$

$$x \approx 265.48 \text{ m}$$

$$d) x^2 + (x+7)^2 = 13^2$$

Pyth. triple

$$x = 5$$

6-56

ΔABC

$$A = \frac{1}{2} b h$$

$$= \frac{1}{2} (6)(3)$$

$$= 9 \text{ cm}^2$$

$$\Delta ABC = \Delta AEC + \Delta ABE$$

$$= \frac{1}{2} (4)(3) + \frac{1}{2} (2)(3)$$

$$= 6 + 3$$

$$= 9 \text{ cm}^2$$

6-57

a) $\frac{22}{m} = \frac{10}{15}$

$$m = 33 \text{ meters}$$

$$\frac{24}{n} = \frac{10}{15}$$

$$n = 36 \text{ centimeters}$$

b)

$$22(24) - \frac{1}{2}(10)(24) - \frac{1}{2}(5)(12)$$

$$528 - 120 - 30$$

$$A = 378 \text{ cm}^2$$

$$P = 22 + 26 + 13 + 19$$
$$80 \text{ cm}$$

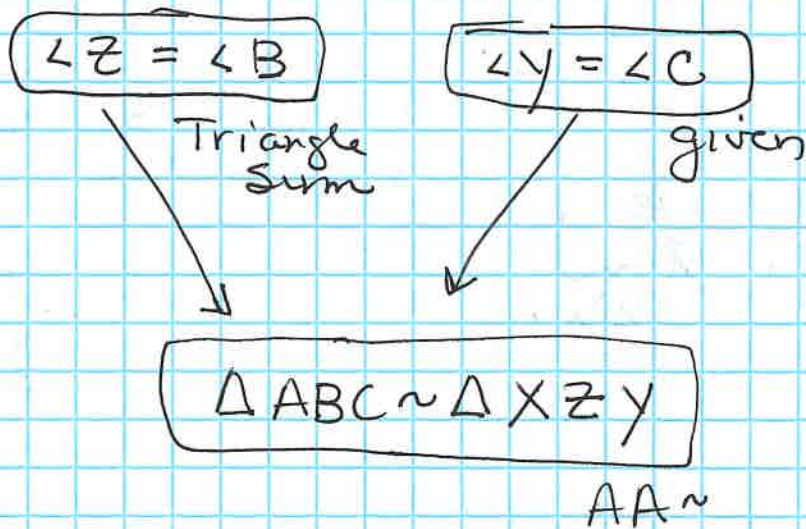
Scale factor is (1.5)

$$A = 378 (1.5)^2$$
$$= 850.5 \text{ m}^2$$

$$P = 80 (1.5)$$
$$= 120 \text{ m}$$

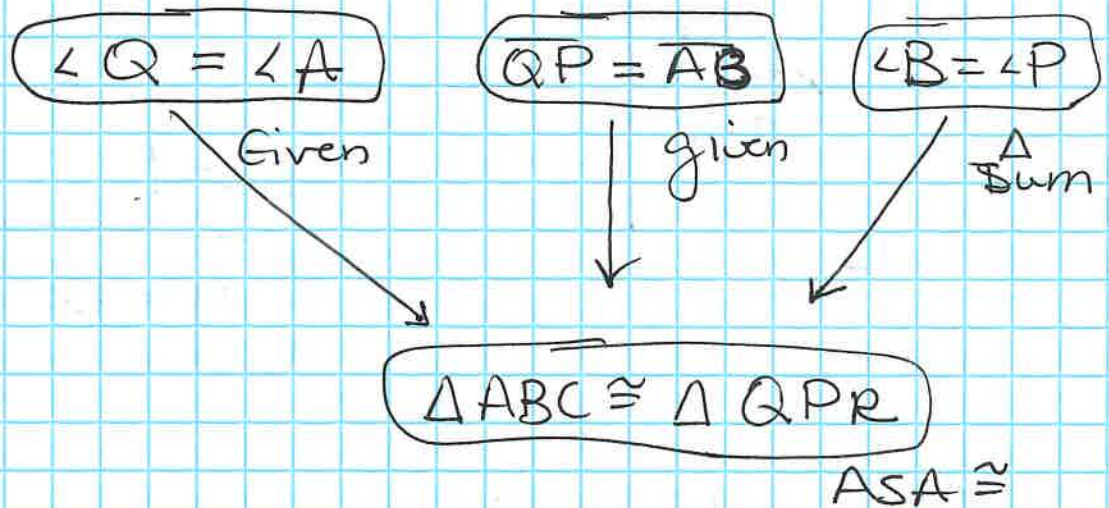
Q: 58

a) similar



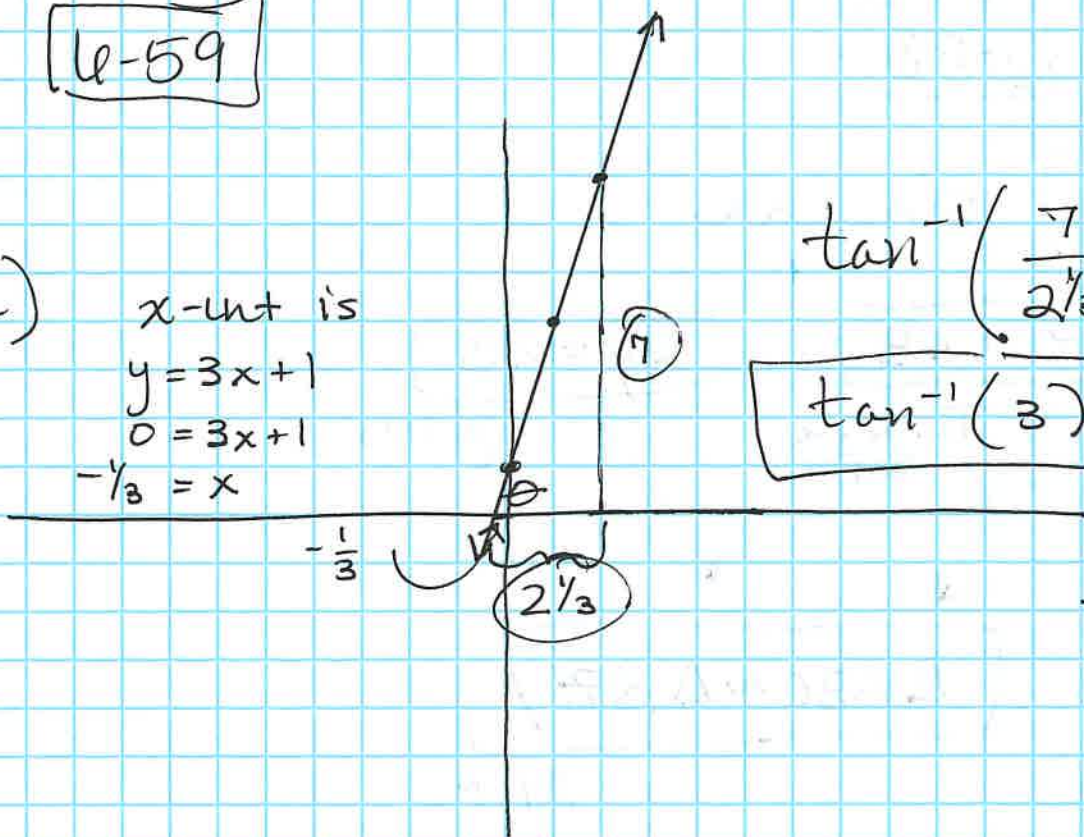
b) Neither

c) Congruent



6-59

a) x-int is
 $y = 3x + 1$
 $0 = 3x + 1$
 $-\frac{1}{3} = x$

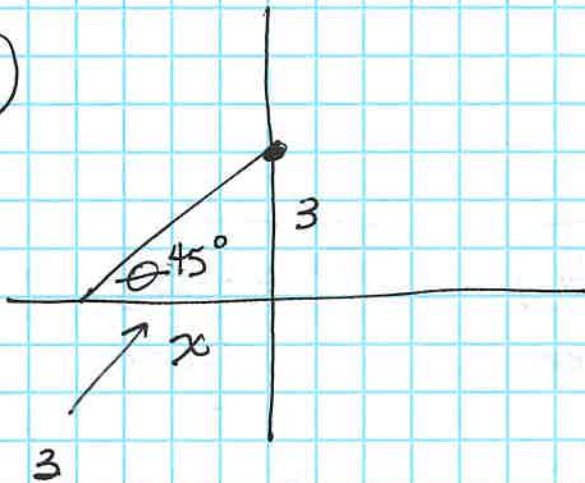


$$\tan^{-1}\left(\frac{7}{2/3}\right)$$

$$\tan^{-1}(3) \approx 71.57$$

$$\frac{7}{2/3} = 7 \cdot \frac{3}{2}$$

b)



$$\tan 45 = \frac{3}{x}$$

$$x = 3$$

$$m = 1$$

$$y = 1x + 3$$

c)

$$y = x + 3$$

$$y = 3x + 1$$

$$x + 3 = 3x + 1$$

$$2 = 2x$$

$$1 = x$$

$$y = 4$$

$$(1, 4)$$

6-60

D