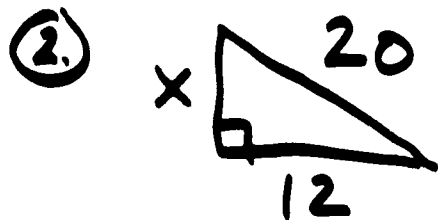
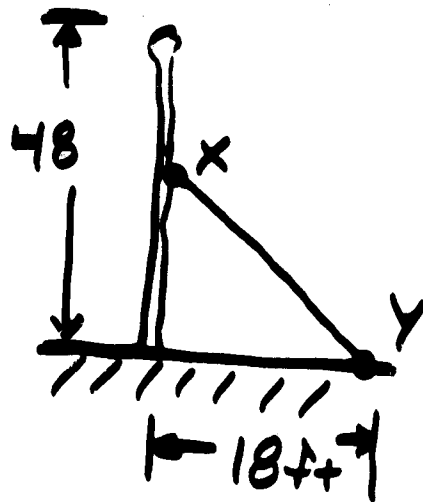


BE-1B

MONDAY 2-11-08

- ① Given: 48 ft. pole  
Support wire ATTACHED  
AT X is half-way  
up pole. How long  
is wire?



FIND X.

IS X (A)  $4\sqrt{34}$  (B) 8 (C) 16 (D)  $16\sqrt{34}$ ?

- ③ A circular stage is 9 foot in RADIUS.  
It has 5 outer RINGS OF SEATS THAT ARE  
EACH 7 feet wide. What is THE  
Circumference of the outer ring of seats?

Use  $C = 2\pi r$

Choose: (A)  $35\pi$  (B)  $44\pi$  (C)  $70\pi$  (D)  $88\pi$

ANSWER WB

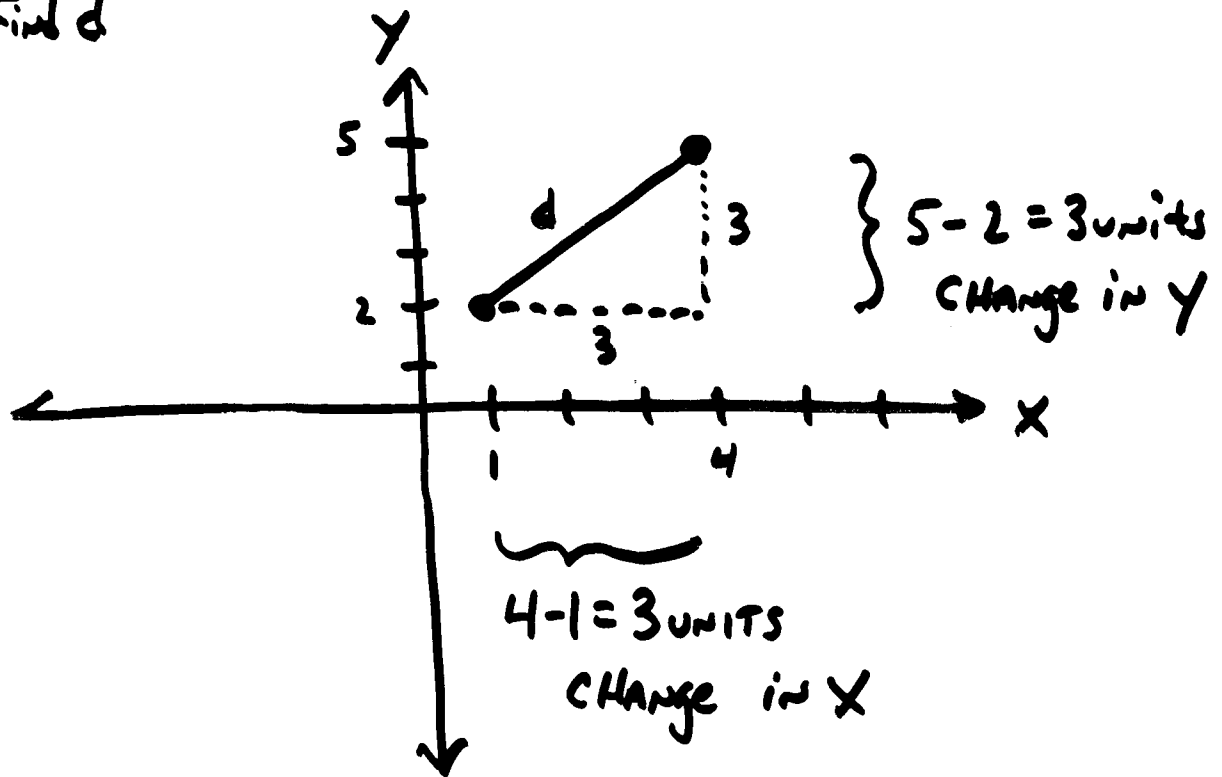
① Pg 70 #5

② Pg 70 #6

③ Pg 50 #6

1.  
You can use the Pythagorean Theorem to find the distance,  $d$ , between 2 points on the  $x$ - $y$  coordinate plane:

ex) Find  $d$



$$d^2 = 3^2 + 3^2$$

$$d^2 = 9 + 9 = 18$$

$$d = \sqrt{18} = \sqrt{9} \sqrt{2}$$

|       |             |         |
|-------|-------------|---------|
| $d =$ | $3\sqrt{2}$ | or 4.24 |
|-------|-------------|---------|

In general, using any two points,  
say  $(x_1, y_1)$  and  $(x_2, y_2)$

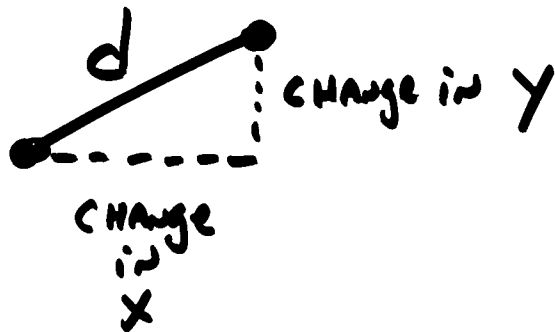
$$d^2 = (\text{change in } x)^2 + (\text{change in } y)^2$$

$$d^2 = (x_2 - x_1)^2 + (y_2 - y_1)^2$$

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

THE DISTANCE FORMULA

$$c^2 = a^2 + b^2$$



Direct  
Result of  
Pythagorean  
Theorem and  
X-Y Coordinates

Ex 1  
pg 611

Find distance between  $(2, 3), (-4, 6)$

$$y_2 - y_1 = 6 - 3 = 3$$

$$x_2 - x_1 = -4 - 2 = -6$$

$$d^2 = (-6)^2 + 3^2 = 36 + 9 = 45$$

$$d = \sqrt{45} = \sqrt{9} \sqrt{5}$$

$$\boxed{d = 3\sqrt{5}} \text{ or}$$

$$d = 3(2.236) = 6.708$$

$$\boxed{d = 6.71}$$

Ex

Find  $d$  between  $(5, -1), (11, 7)$

$$y_2 - y_1 \Rightarrow 7 - (-1) = 8$$

$$x_2 - x_1 = 11 - 5 = 6$$

$$d^2 = 8^2 + 6^2 = 64 + 36 = 100$$

$$\boxed{d = \sqrt{100} = 10}$$

Hw: Read Ch 11-5, Pg 613 # 13 to 17