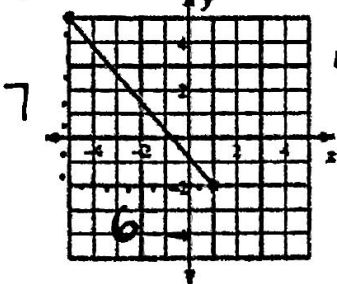


Homework: Pythagorean Theorem & Distance Formula

**Answer on a separate sheet of paper...Show ALL work! For #1-10, find the distance between each pair of points.

1)



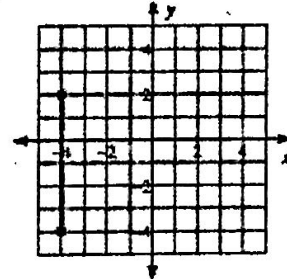
$$7^2 + 6^2 = c^2$$

$$49 + 36 = c^2$$

7) $(-2, 3), (-7, -7)$ - $(-2, 3)$
 $(-7, -7)$
 $\frac{5^2 + 10^2 = c^2}{25 + 100 = c^2}$

9) $(5, 9), (-7, -7)$

4)



8) $(2, -9), (-1, 4)$

10) $(8, 5), (-1, 3)$

11. The legs of a right triangle have lengths a and b . The hypotenuse has length c . Find the unknown length for each triangle.

$a = 18, c = 82$, so $b =$ _____

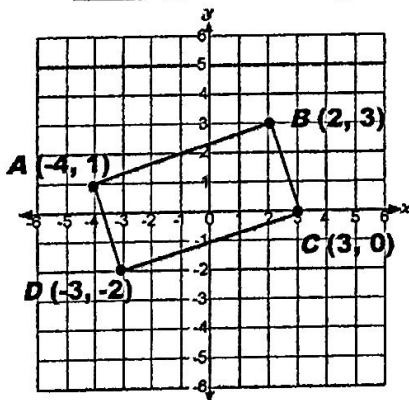
$a = 12, c = 37$, so $b =$ _____

12. Tell whether the triangle with the given lengths is a right triangle.

a. 10 cm, 24 cm, 26 cm _____

b. 4 cm, 6 cm, 10 cm NO! $4^2 + 6^2 \stackrel{?}{=} 10^2$
 $16 + 36 \stackrel{?}{=} 100$
 $52 \neq 100$

13. Example: Find the lengths of each side.



AB

BC

CD

AD

$$\frac{(3, 0) - (-3, -2)}{6^2 + 2^2 = c^2}$$

$$36 + 4 = c^2$$

$$\sqrt{40} = \sqrt{c^2}$$

Perimeter of Rectangle ABCD:

Area of Rectangle ABCD:

$(A = bh)$

$b =$ _____ $h =$ _____