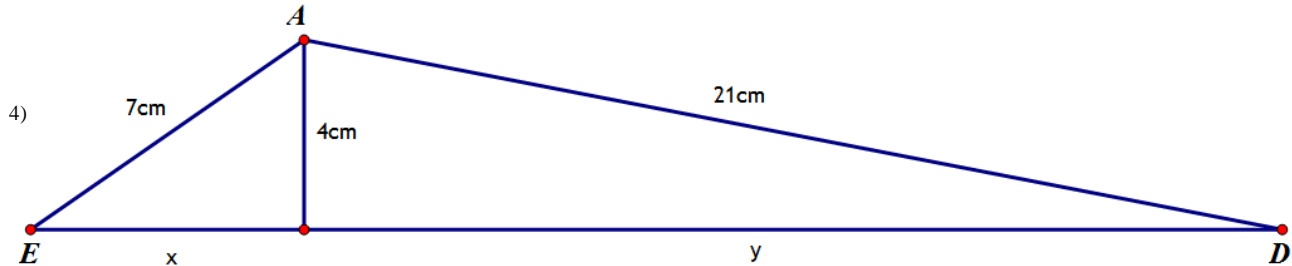
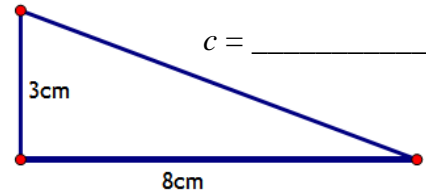
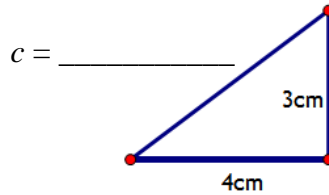
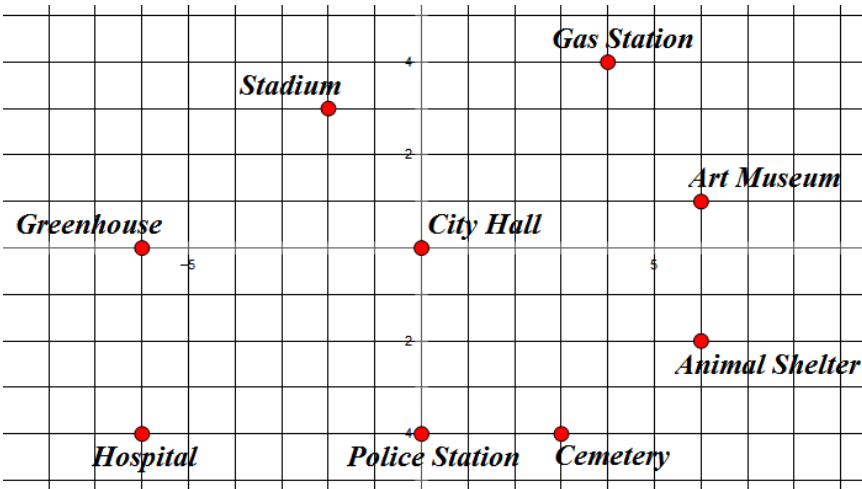


Find the missing side in each triangle.



Find the following helicopter distances:



5) Greenhouse to the Stadium

$$\sqrt{\quad^2 + \quad^2} = \sqrt{\quad} \approx \quad$$

6) Police Station to the Art Museum

$$\sqrt{\quad^2 + \quad^2} = \sqrt{\quad} \approx \quad$$

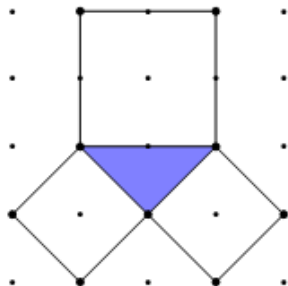
7) City Hall to Art Museum

$$\sqrt{\quad^2 + \quad^2} = \sqrt{\quad} \approx \quad$$

8) Cemetery to Gas Station

$$\sqrt{\quad^2 + \quad^2} = \sqrt{\quad} \approx \quad$$

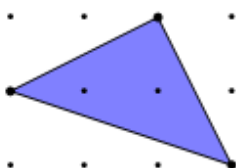
9) Animal Shelter to the Stadium $\sqrt{\quad^2 + \quad^2} = \sqrt{\quad} \approx \quad$



10a) In the diagram at left, find the area of the little squares _____

10b) Find the area of the big square _____

10c) Write something interesting about the sum of the little squares and the big square.



11a) Build a rectangle around the triangle at left.

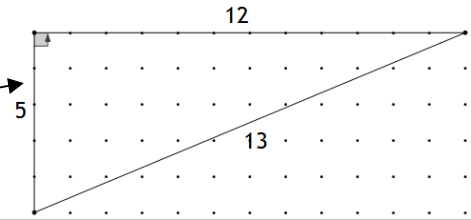
11b) Find the area of the shaded triangle by subtracting the 3 "corner" triangles from the area of the rectangle. _____

12) Check each set of 3 side lengths. If the SQUARES of the 2 short sides adds up to the SQUARE of the long side, then you've got a right triangle, my friend.

Example: Is a triangle with side lengths of 5 in., 12 in. and 13 in. a right triangle?

$$5^2 + 12^2 = 25 + 144 = \boxed{169}, \sqrt{169} = 13$$

Yes, it's a right triangle.



12a) 10 cm, 24 cm, 26 cm _____

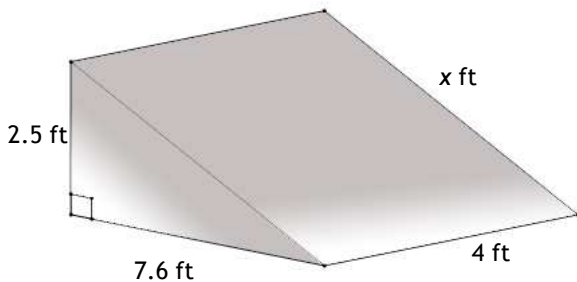
12b) 5 inches, 10 inches, $\sqrt{50}$ inches _____

12c) 4 miles, 6 miles, 10 miles _____

12d) 8 m, 9 m, 15 m _____

13) 10cm, 10cm, $\sqrt{200}$ cm _____

14) 9 inches, 16 inches, 25 inches _____



15) The skateboard ramp (wedge) at left has a vertical height of 2.5 ft. The length of the base is 7.6 ft. Find the length the ramp (x).

16) Which skateboard ramp dimension DO WE NOT NEED TO KNOW in order to solve problem #15? _____

17) If we were actually going to build the skateboard ramp, how much plywood would we need?

a) Area of the ramp surface _____

b) Area of the 2 triangular sides _____

In geometry, B is often used to represent the "area of the base."

If the base is circular, then $B = \pi r^2$, where r is the radius.

18) Find B when r is 2.5 m _____

If the base is a rectangle, then $B = lw$ or $B = bh$ (use length and width or base and height)

19) Find B when the length is 4 and the width is 6.5 _____

The volume of a right cylinder is Bh , like a stack of CDs. It's the area of the base (B) times the height of the stack. $V_{cylinder} = Bh$ or $V_{cylinder} = \pi r^2 h$ (same thing)

20) Find the volume of a cylinder with a radius of 4 and a height of 6 _____

A cone's volume is $V_{cone} = \frac{Bh}{3}$ or $V_{cone} = \frac{\pi r^2 h}{3}$

Volume of a cone with radius 5 and height 12 = _____