

1. Floorplan:

Find the area of this house:



2. POOL:

This pool is 3 times longer than it is wide.

If the area of the pool is 300ft^2 , what are the dimensions of the pool?



3. FENCING:

Mike and Marie want to build a fence in their yard for their dog. They have 100 feet of fence.

Marie wants to build a square pen (using all 100 ft)

Mike wants to build a rectangular pen 15 ft wide, 35 ft long.


Which design will give their dog more room to play?

How much more room?



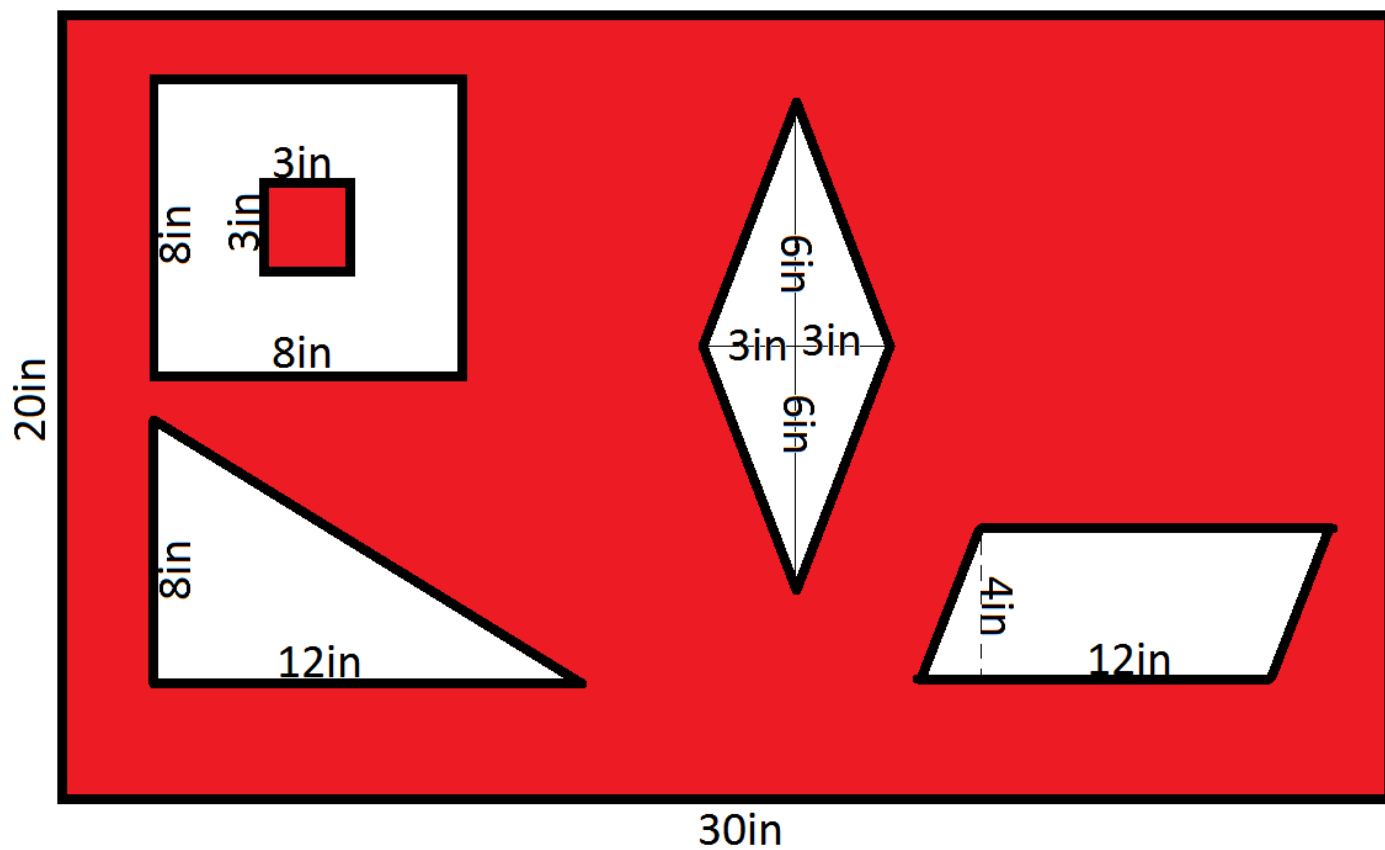
4. GARDEN

Find this number!!

Marie's garden is in the shape of a rectangle,  feet wide and 18 feet long. 100ft^2 is used to plant peppers, 50ft^2 is for tomatoes, and 66ft^2 is for spices. There is no space left over.

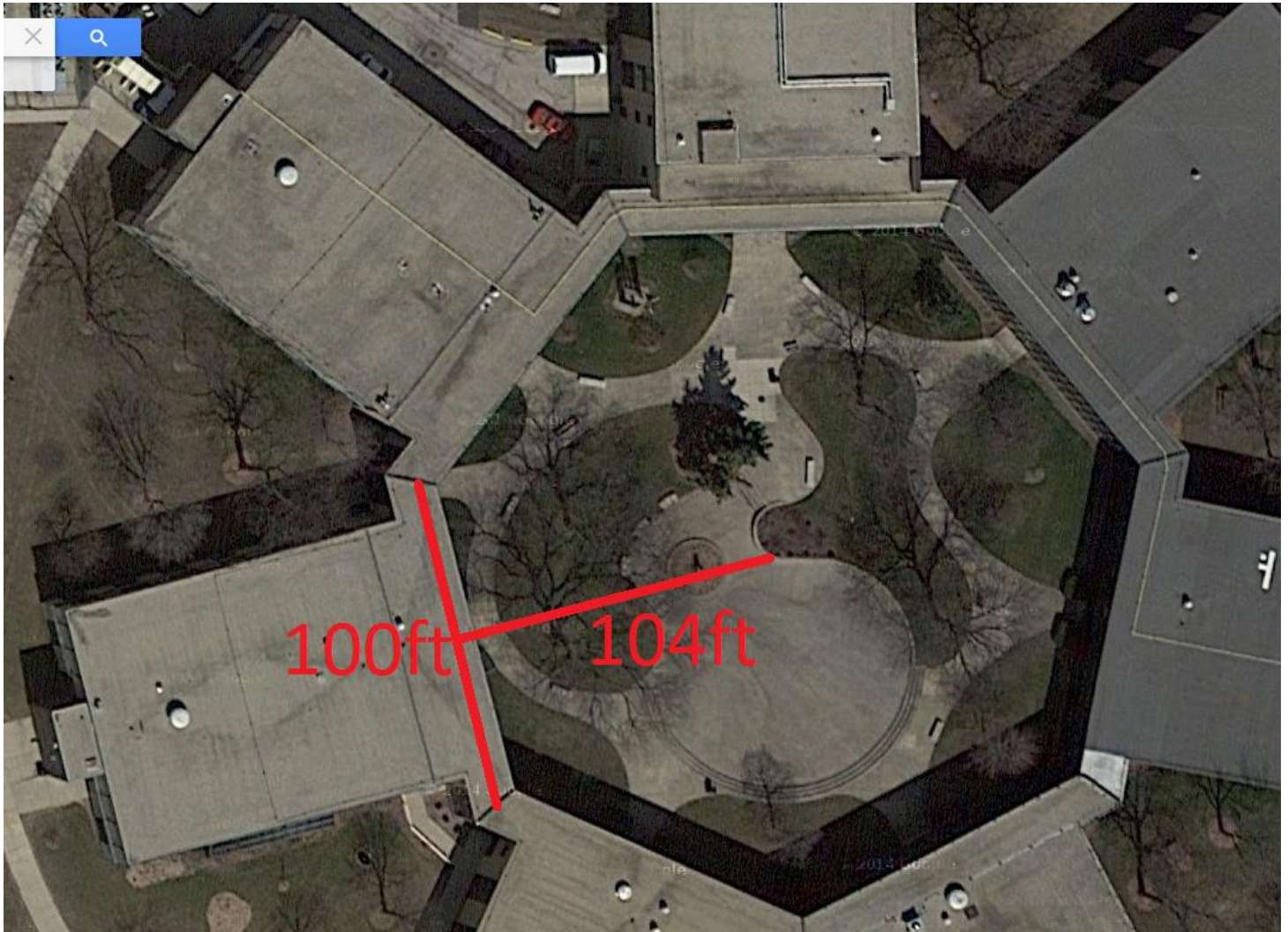
1.

5. Find the area of the red region



6. LEYDEN COURTYARD:

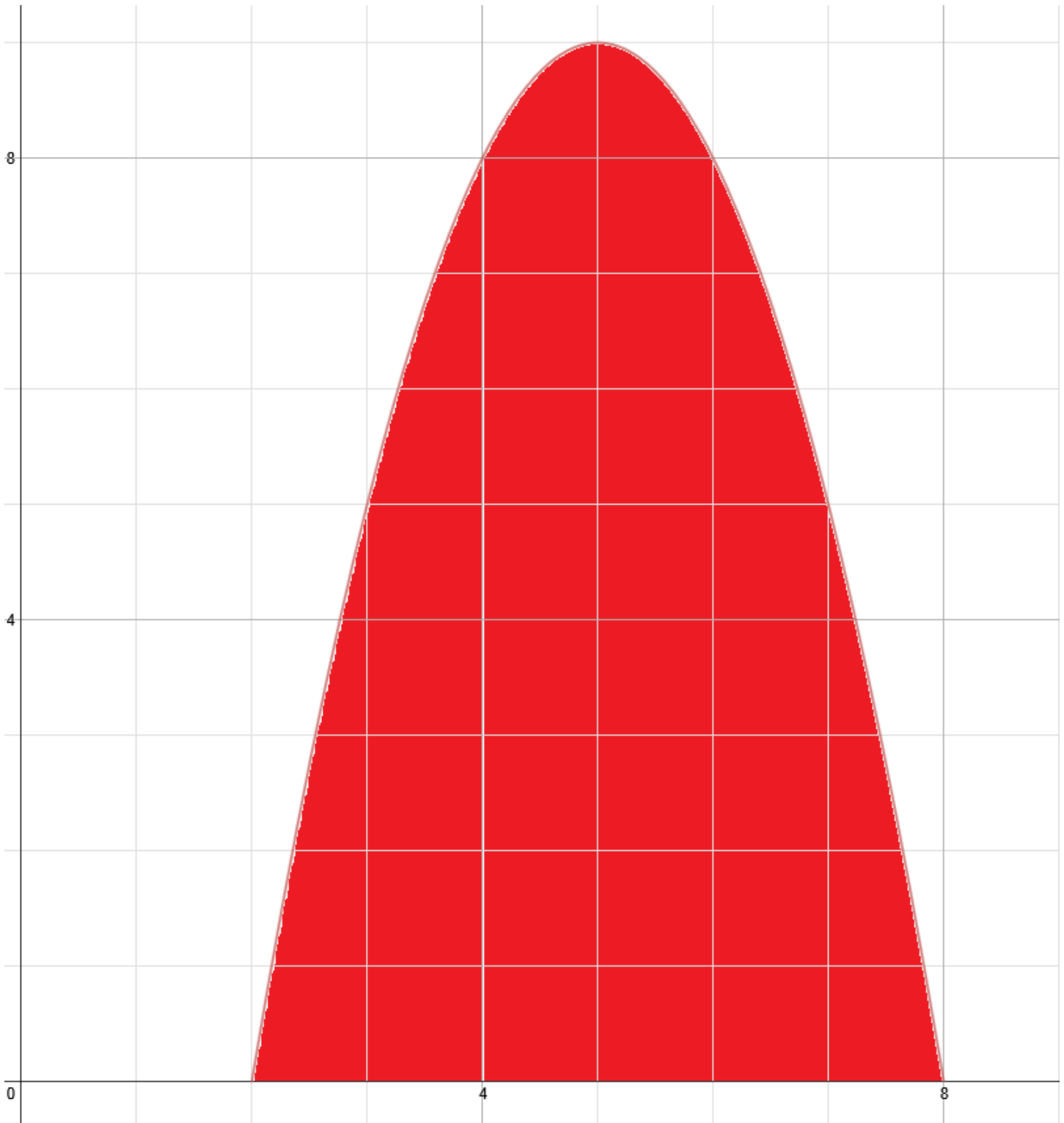
There are 5,280 feet in a mile. How many laps around the courtyard does the track team have to run to run a mile?



ESTIMATION:

7. Find the area of the shaded region.

Answer must be within 3% of the correct answer.



8. The area of a rectangle is 360in^2 .
(that means the sides could be 360in by 1in, or 180in by 2in...)
- If the perimeter of that rectangle is 76in, what are the length and width of the rectangle?

9. At 30 inches deep, 1 square foot of snow is about 2 gallons of water.



- A) If this entire park is covered with snow 30 inches deep, how many gallons of water will it produce when it melts?
- B) The local drainage system is designed to take 1,000,000 gallons. How much extra water will there be if the snow melts quickly?

10. Amy's summer job is to paint the CNA building (in downtown Chicago) red.

- Each side of the building is rectangular.
- The building is 600 feet tall,
- The sides of the building are 150 feet long and 80 feet long
- 50% of the surface is window (does not need to be painted)
- 1 gallon of paint covers 300 ft^2 .

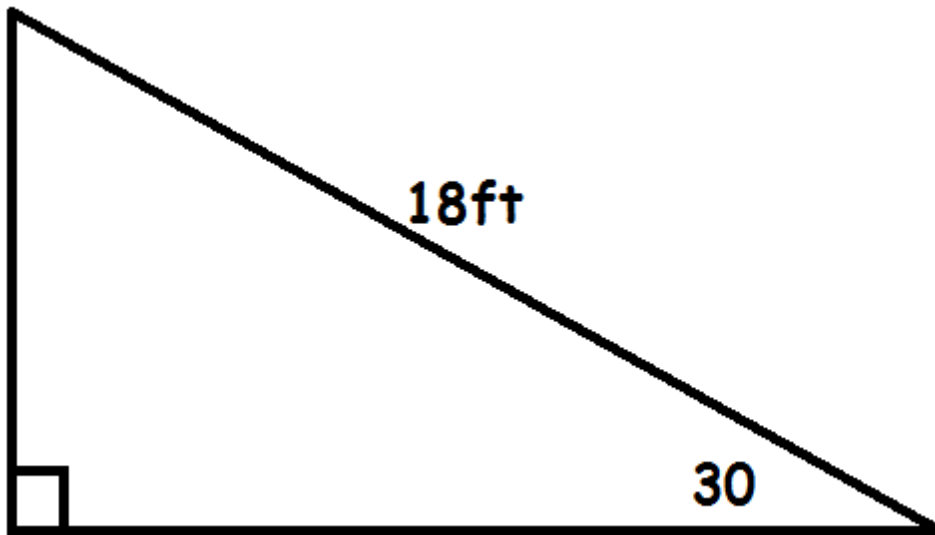
(The roof and floor are not painted)

How many gallons does Amy need to buy?

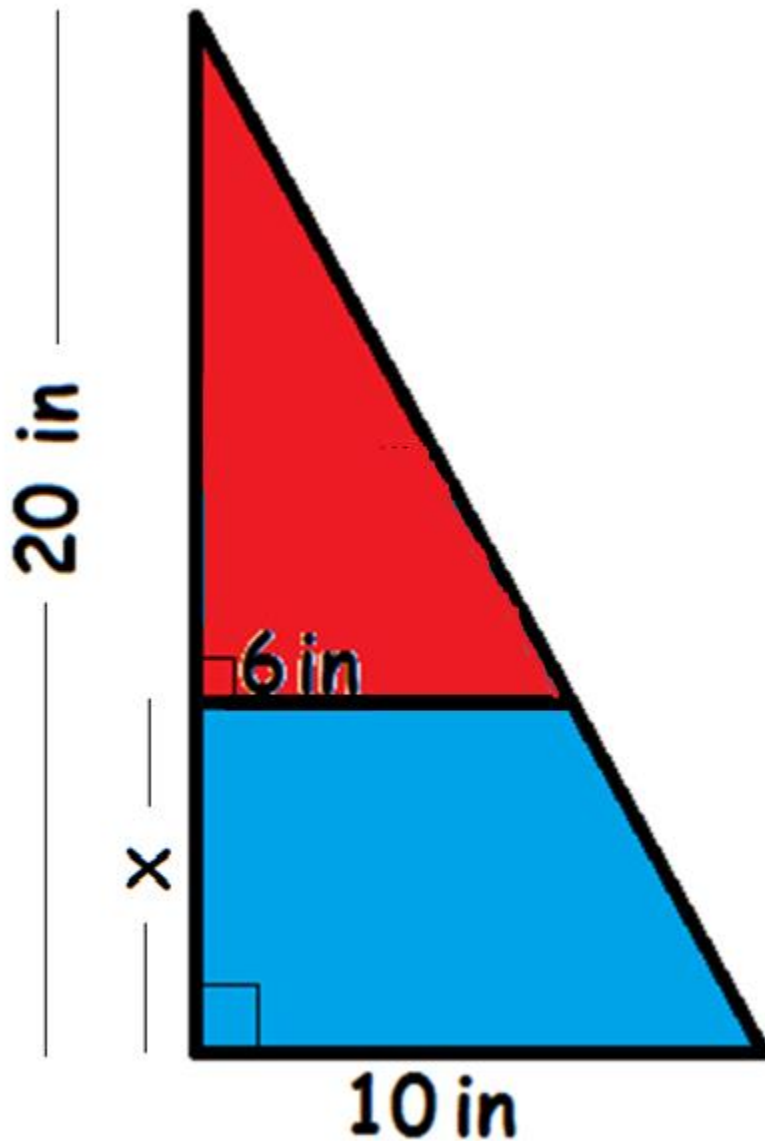


11. Find the area of the triangle.

(you will have to find base & height using SOH-CAH-TOA)



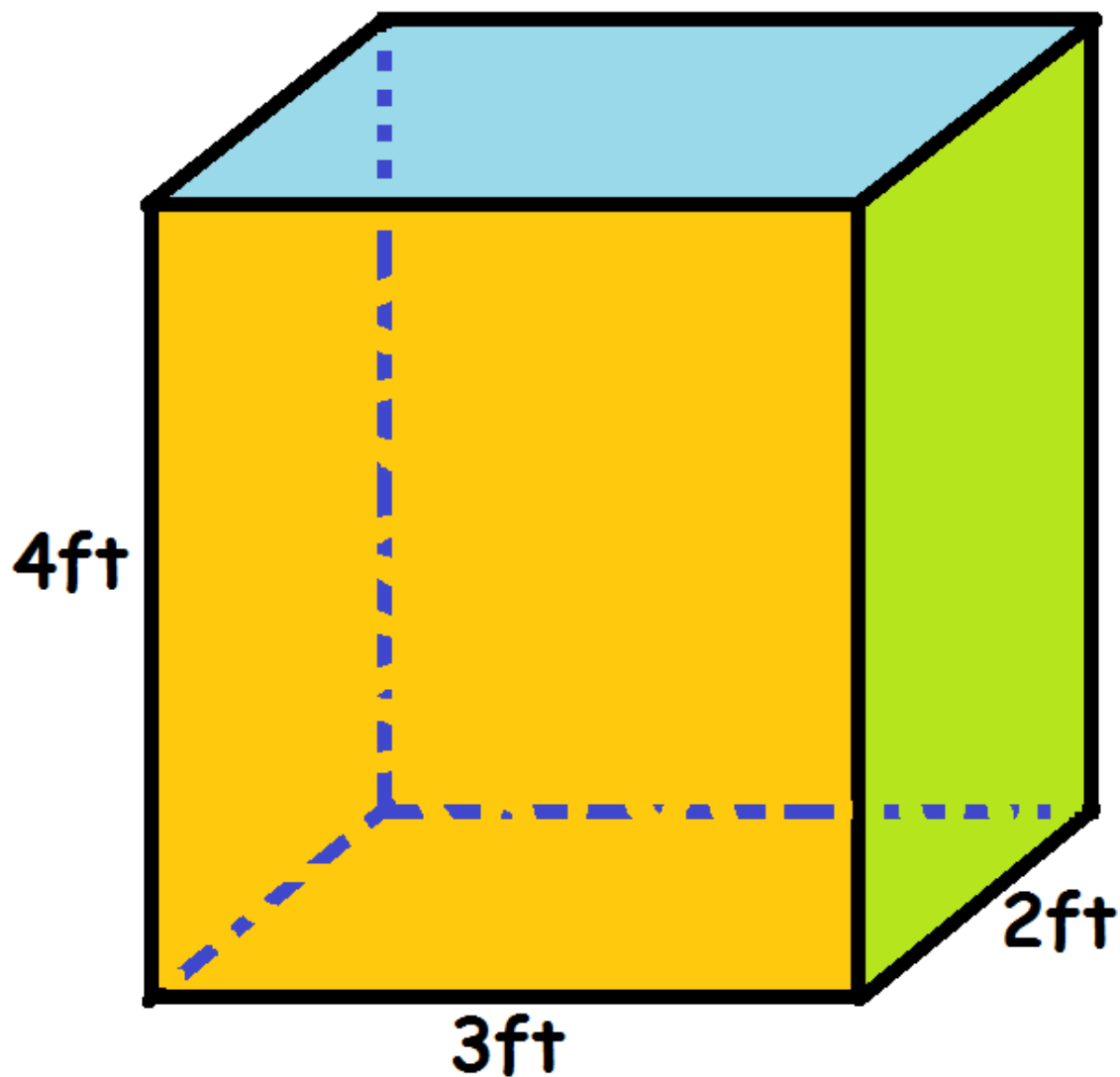
12. The area of the red triangle is 36in^2 .
What is the area of the blue section?
What is the length of X?



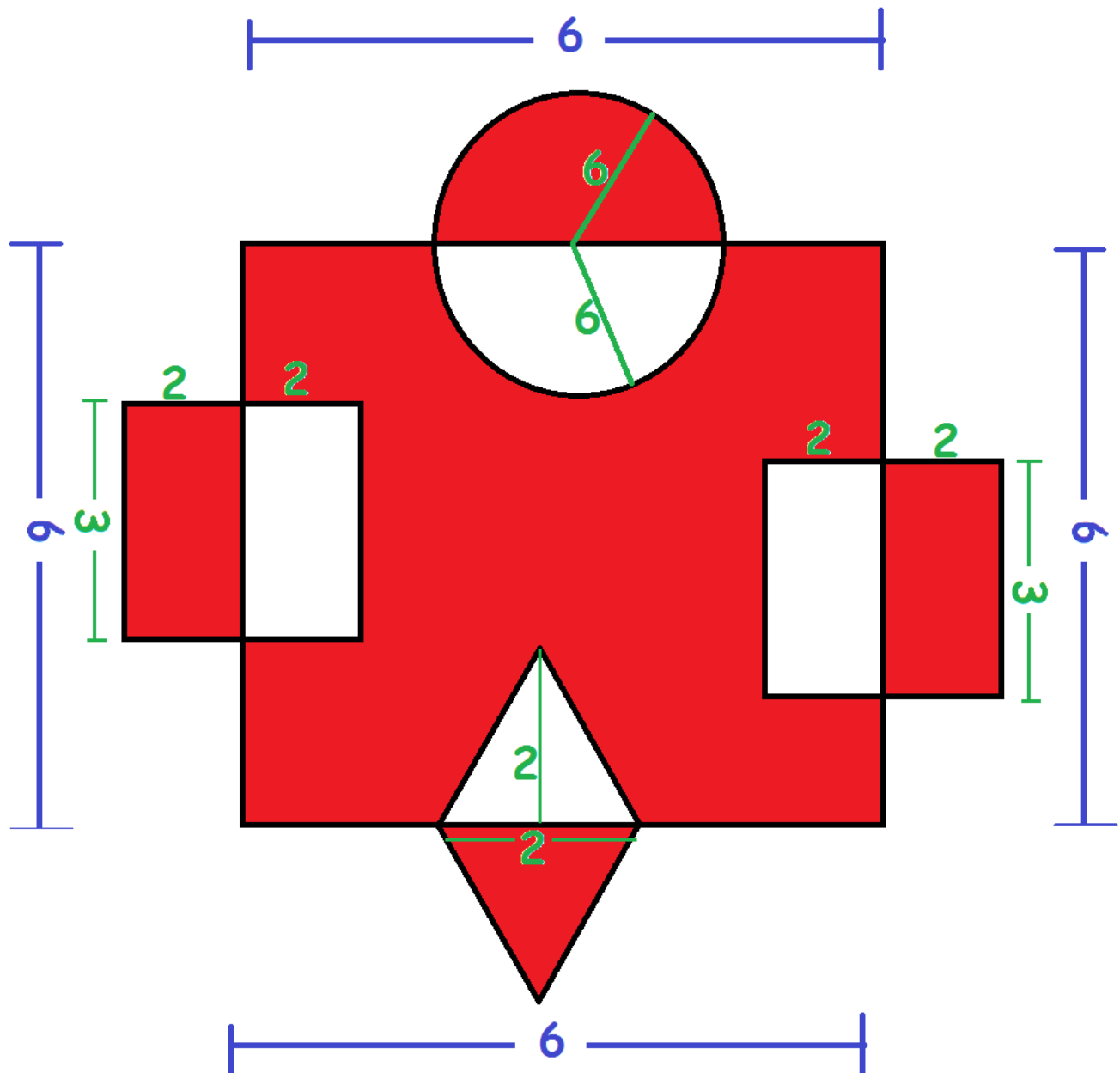
13. The driveway is 18ft wide and 30 feet long. The molecular density of the concrete is 150 pounds per cubic foot. There is 5,280 feet in one mile. The square root of 9 is three. There are 2.2 pounds in a kilogram. Elvis Presley was 42 when he died. Avogadro's number is 6.02×10^{23} . The man shoveled 528 ft² of snow. In 1938, the minimum wage was \$0.25 per hour. The state of Illinois is 57,914 square miles. How many square feet is the dog's bed? Some turtles can live to be over 100 years old.



14. The sides of this box are all rectangles.
Find the total area of all the sides.



15. Find the area of the red region:



16. Lisa Hires Ed to paint her house.
(painting outside walls only, not floor or ceiling)

Ed paints the house in 2 days and charges her \$300.
He charges by the square foot .

Bonnie hears about how great a job Ed did, and hires him to paint her house.

Bonnie's house is exactly like Lisa's, but bigger. (similar)
Bonnie is super rich and all of the dimensions (length, width, height) of her house are exactly 3 times larger than Lisa's.

- A) How long will it take Ed to paint her house?
- B) How much should Ed charge her?



17.

A) The area of a trapezoid is 84ft^2 . The bases of the trapezoid are 15ft and 3ft. What is the height of the trapezoid?

B) A triangle has an area of 36in^2 . If the height of the triangle is 12in, what is the length of the base?



*this picture has nothing to do with the problem