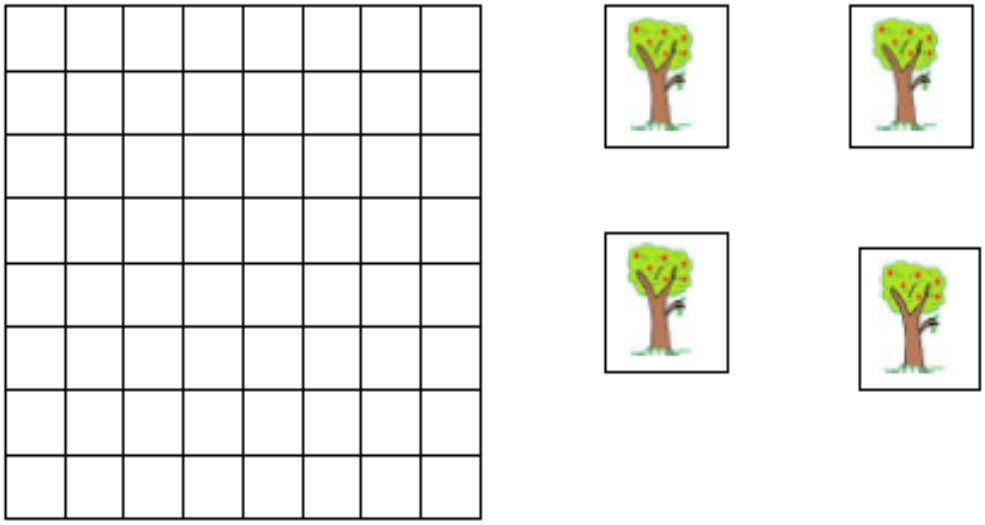
Lesson 5: Resources

Alex and Aldo planted several square apple orchards. The table below shows the number of trees and the size of the orchards (See ppt demonstration).

Orchard Number	Length of Each Side (feet)	Area of Each Orchard (ft^2)	Number of Apple Trees
1^{st}	x	?	y
2^{nd}	8 ft	64 ft^2	4 trees
3^{rd}	12 ft	144 ft^2	9 trees
4^{th}	16 ft	256 ft^2	16 trees
5^{th}	x	?	y
n			

Orchard #2 is 8ft x 8ft = $64ft^2$ and has 4 trees.

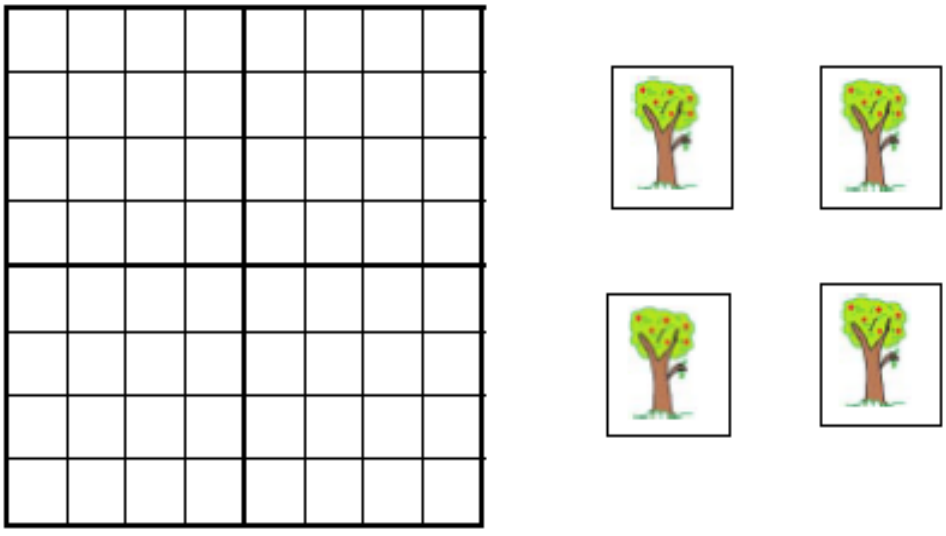


How much space is needed for one tree?

$\frac{64^2}{4\ trees} = \frac{?^2}{1\ tree}$ to get one tree, student should divide the group of trees by four $\frac{64^2}{4\ trees \div 4} = \frac{?^2}{1\ tree}$.

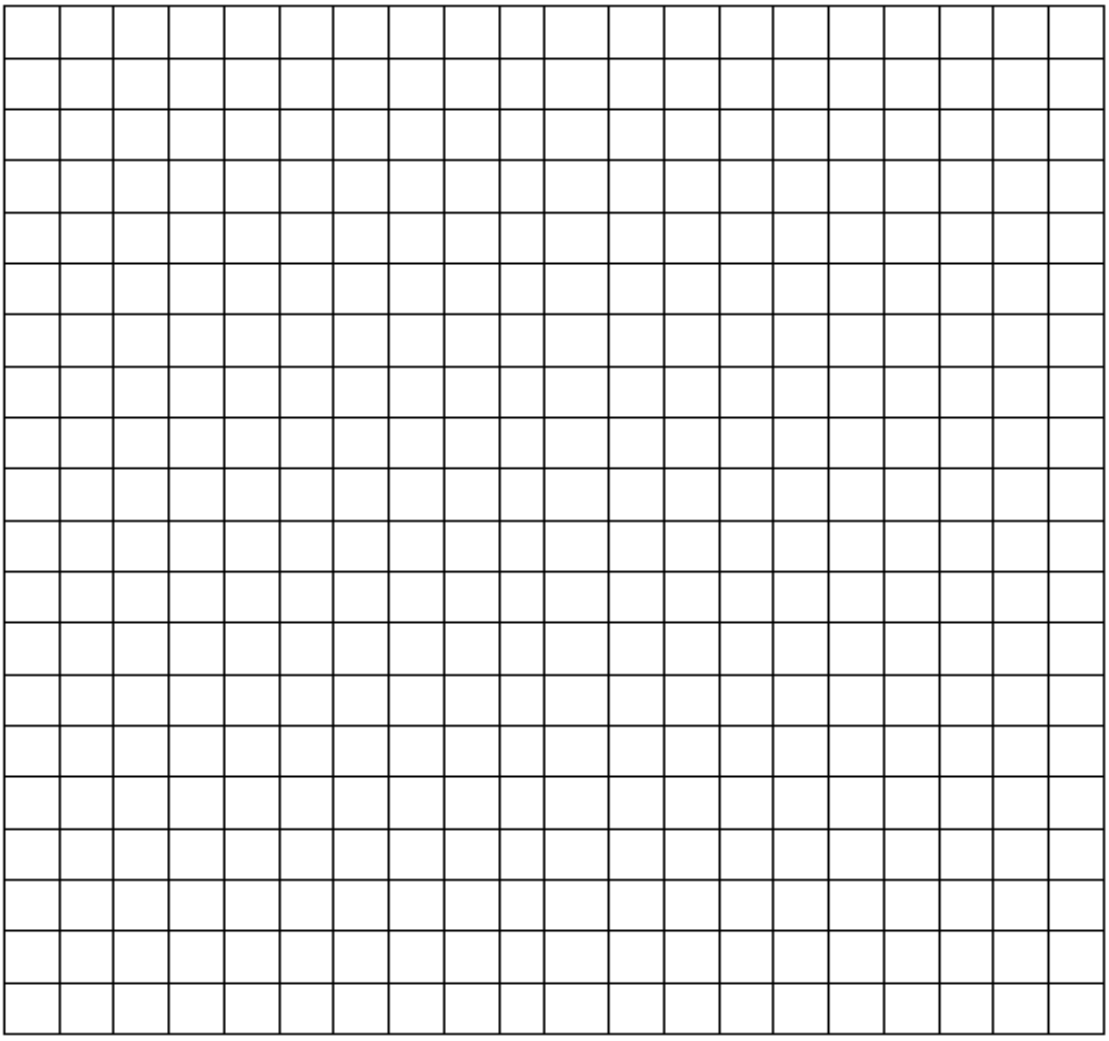
If the student divides the trees by four, she/he must divide the area of the orchard by four

$\frac{64^2 \div 4}{4\ trees \div 4} = \frac{?^2}{1\ tree}$

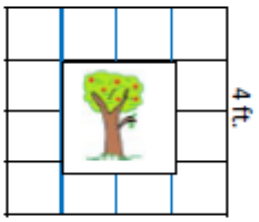


Orchard #5 is 20ft x 20ft

20 ft.

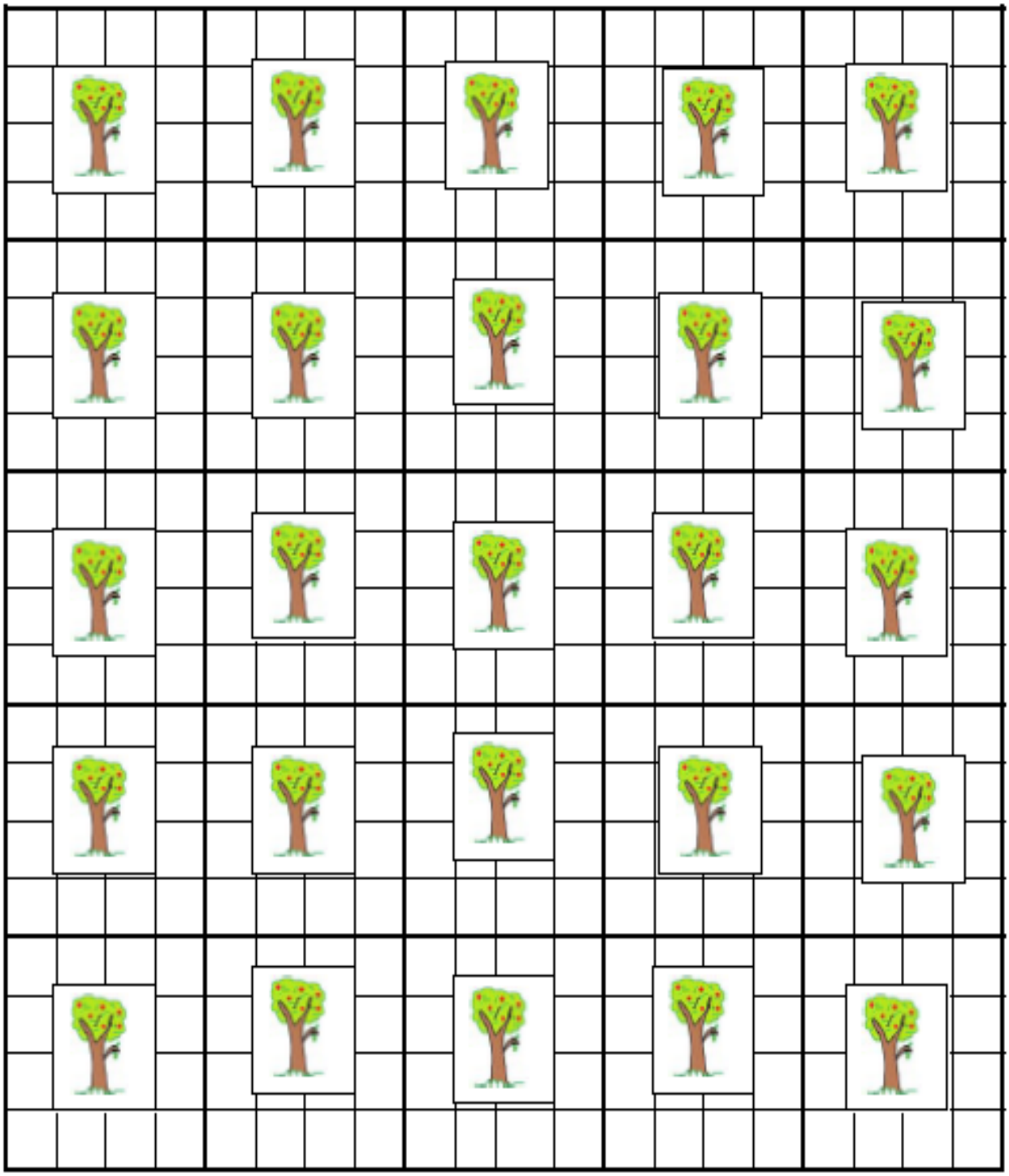


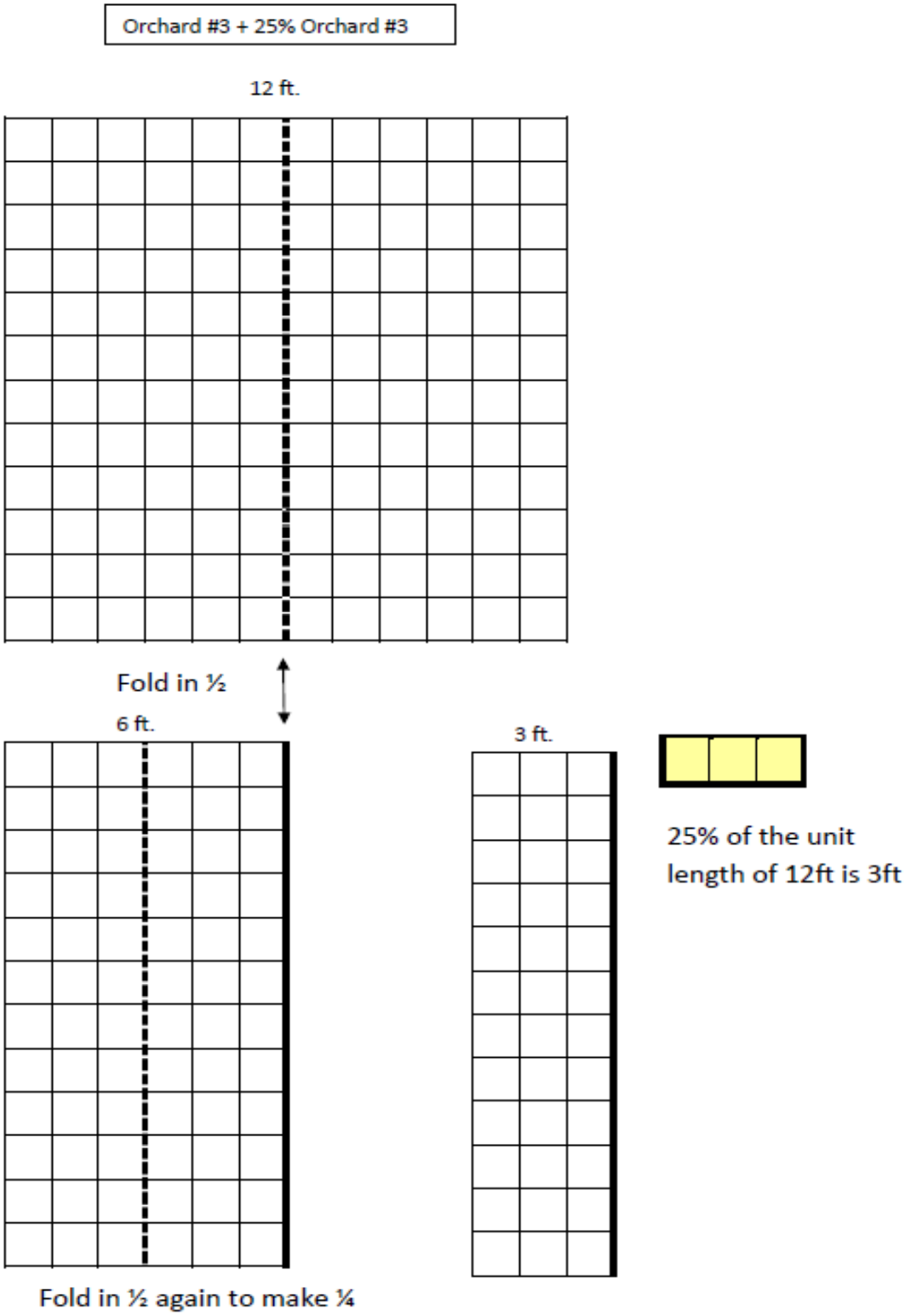
Unit rate $16ft^2$ per tree



The unit rate is area per tree:

20 ft.





Orchard #3 + 25% Orchard #3