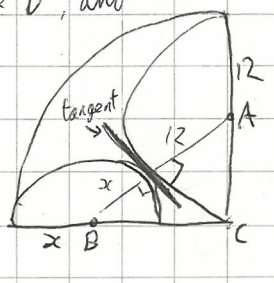
Freddy P + John M

As the side length of the Quarzmere Quadrant is 24, the ~~side~~ radius of the orchard is 12.

Let the glade's radius be x.

Let the centre of the orchard be A, and the glade's be B, and the Quadrant's C

As the radius meets a tangent at 90°, AB is straight line.



The triangle A B C is right angled.

From Pythagoras' theorem: $a^2 + b^2 = c^2$

$12^2 + (24 - x)^2 = (12 + x)^2$

$144 + 576 - 48x + x^2 = 144 + 24x + x^2$

$(-x^2 - 144)$

$576 - 48x = 24x$

$(+48x)$

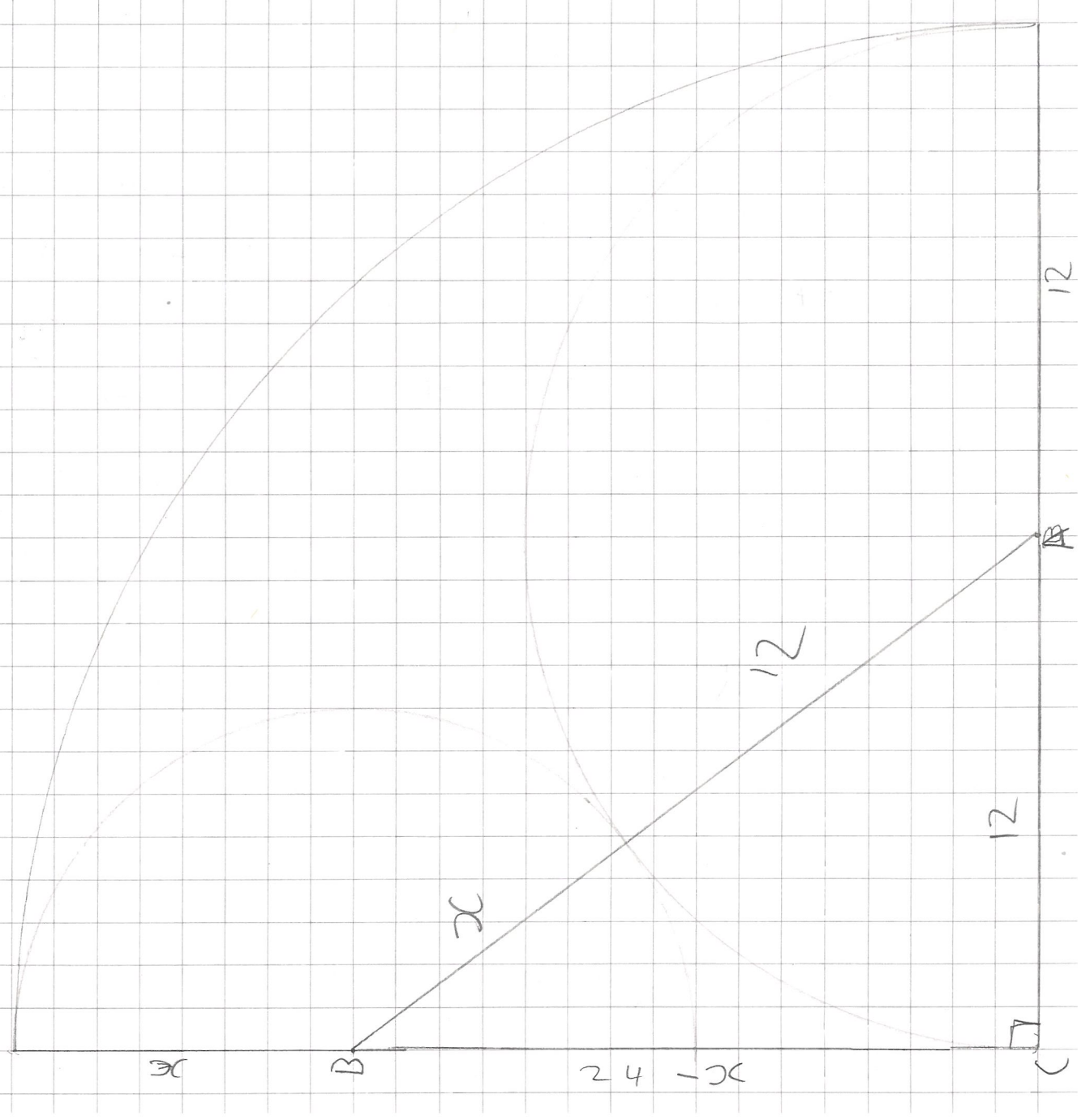
$576 = 72x$

$(\div 72)$

$x = 8$

Therefore the radius is 8 metres

PTO


12
A
12
x
12
x
B
24 − x
C