(r + a)^2 = r^2 + Y^2 ................................................................. (1)
(R – a)^2 = (2r – R)^2 + Y^2 ................................................................. (2)

(r + a)^2 - (R - a)^2 = r^2 - (2r – R)^2 ..........[subtracting (2) from (1)]
r^2 + 2ar + a^2 - (R^2 - 2aR + a^2) = r^2 - (4r^2 - 4rR + R^2)
2a (r + R) = 4r(R – r)

from which

\[ a = \frac{2r(R – r)}{r + R} = \frac{2(213.324)(335.522 – 213.324)}{213.324 + 335.522} = 94.991 \]

Y^2 = (r + a)^2 – r^2 = (213.324 + 94.991)^2 – 213.324^2

Y = 222.601’

Note that the triangle with hypotenuse A-B and short leg “h” is similar to half of the isosceles triangle; in fact

\[ \frac{2r + 1/2(2R – 2r)}{h} = \frac{h}{R – r} = \frac{r + R}{h} \]

\[ h^2 = (213.324 + 335.522)(335.522 – 213.324) \]

h = 258.975
a) In the beginning was W; thus $W$
and W was with G; thus $W + 1$, since $G = 1$
and W was G, $W = G = 1$
as in beginning, W; thus $W$

Thus, $\frac{W}{W + 1} = \frac{1}{W}$
Cross multiplying gives us: $1 + W = W^2$

b) What number when increased by one becomes its own square?
$1 + w = w^2$

And we have the same problem as part a). We use the large W and the small w for illustrative purposes only.

Solution to a) and b)

After rearranging terms, we apply the quadratic formula to $w^2 - w - 1 = 0$
The quadratic formula is of the form: $ax^2 + bx + c = 0$. Here $x = w$, $a = 1$, $b = -1$, and $c = -1$.
The positive solution is:

$w = \frac{(1+\sqrt{5})}{2} = 1.618$, rounded to $1.62$ (SDQ of 9) is known as phi, $\Phi$ the Golden Proportion.

**Special Question Answer**

As opposed to modern maps which are drawn with North on top, ancient maps were drawn with East on top, since the direction of East was considered sacred. The top of the map, East, was called up, the bottom of the map, West, was called down, South was called right, and North was called left.

Therefore, in ancient times going from Israel to Egypt was traveling down, from East to West. Moses traveled way down in Egypt land.

The arrangement of the 12 tribes of Israel follows that pattern with the tribe of Benjamin, which means “son of the right hand,” on the right side or in the South.