Logarithm Equation with different bases

Trinh

For the logarithm equation in this Unit 4, I come up with three ways to solve the log equation with different bases. Any other ways you can think of?

Solve

**Change base #1**

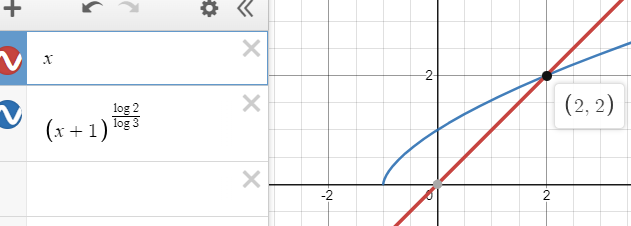
With and

We have

Multiply by log(2)

Convert to exponent

Solve by graph 🡺 x = 2

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**Change base #2**

With

We have

Or

Convert to exponent

Solve by graph 🡺 x = 2



*This is actually the same concept with the previous one, but just more elegantly in writing out.*

**USub to exponent**

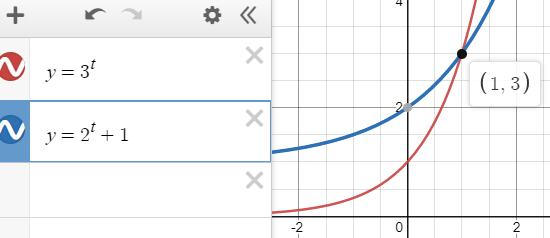
Let

We have

Convert to exponent

(Both are monotonic increasing function, they only intersect at one point)

Solve by graph t = 1



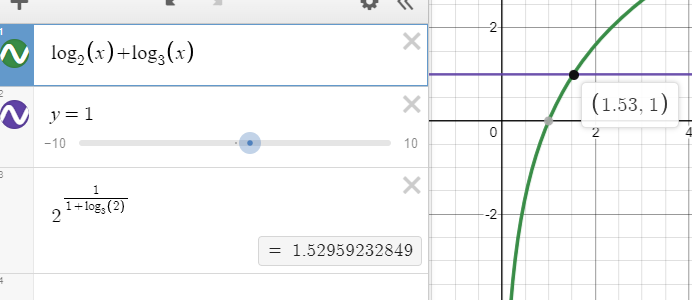
**Other method ?**

One more problem next

Solve

**Change base**

1.529



**USub to exponent**

Let

We have

