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## Opgave 269

$$a: 2^x = 5$$

$$b: 2^{x+2} = 5$$

$$c: 10^{x-1} = 12$$

Ligning a

$$2^x = 5$$

$$\log(2^x) = \log(5)$$

$$x \cdot \log(2) = \log(5)$$

$$x = \frac{\log(5)}{\log(2)}$$

$$x = \frac{0.699}{0.301}$$

$$x = 2,322259$$

Ligning b

$$2^{x+2} = 5$$

$$\log(2^{x+2}) = \log(5)$$

$$(x + 2) \cdot \log(2) = \log(5)$$

$$x + 2 = \frac{\log(5)}{\log(2)}$$

$$x = \frac{\log(5)}{\log(2)} - 2$$

$$x = 0,3219281$$

Ligning c

$$10^{x-1} = 12$$

$$\log(10^{x-1}) = \log(12)$$

$$(x - 1) \cdot \log(10) = \log(12)$$

$$x - 1 = \frac{\log(12)}{\log(10)}$$

$$x = \frac{\log(12)}{\log(10)} + 1$$

$$x = 2,079181$$