

Complex Exponential Equations Bonus

Solve each Complex Exponential Equation for 'x.' Answers will be whole numbers.

1) EXAMPLE: $3.47 \cdot 8^x - 1292.58 = 484.06$

$$+1292.58 \quad +1292.58$$

$$3.47 \cdot 8^x = 1776.64$$

$$/3.47 \quad /3.47$$

$$8^x = 512$$

$$x = 3$$

I add 1292.58 to both sides.

I divide both sides by 3.47.

I check for the power of 8 at equals 512...

$$8^0 = 1, 8^1 = 8, 8^2 = 64, 8^3 = 512, 8^4 = 4096...$$

2) $15 \cdot 3^x + 45 = 1260$

3) $7.5 \cdot 2^x - 10 = 230$

4) $2.5 \cdot 4^x + 25.5 = 65.5$

5) $-3 \cdot 5^x - 13.6 = -88.6$

6) $4.4 \cdot 6^x + 19.38 = 45.78$

7) $100 \cdot 2^x + 365.25 = 1965.25$

8) $-4.75 \cdot 7^x + 3200 = 1570.75$

9) $0.35 \cdot 4^x + 225.95 = 584.35$

10) $1.35 \cdot 2.2^x + 129.75 = 144.1248$

11) $-6.8 \cdot 3.14^x + 1190 = 979.4778$