

START!

Question:
Simplify i^{17}

Answer:
 i

Question:
If you have a 4.2 mg sample of Uranium, whose half-life is 32 years, how much will be left after 29 years?

Answer:
2.24

Question:
Simplify $\frac{(5-3i)}{(2+3i)}$

Answer:
 $\frac{1-2i}{13}$

Question:
How long will it take to double a \$700 investment at 4.8% interest compounded monthly?

Answer:
14.5

Question:
 $(5+2i)(2-3i)$

Answer:
 $16-11i$

Question:
Jake (from State Farm) invested a sum of money at 6.3% interest compounded continuously for 5 years. If Jake (from State Farm) now has \$24085 in his account, how much did he initially invest?

Answer:
17576.97

Question:
Solve for x.
 $\log_5 15625 = 50x + 25$

Answer:
~~88.0~~

Question:
Solve for x.
 $\log_4(2x + 12) = 2$

Answer:
2

END!

Answer:
32

$2x^{\frac{5}{4}} + 12 = 44$

Question:
Solve for x:

Answer:
 $\pm 6i$

$6x^2 + 280 = 64$

Question:
Solve for x.

3

Answer:

Question:
Solve for x.
 $56x + 8 = 256x$

$$i^{77} = i^{70} \cdot i$$

$$= (i^2)^{35} \cdot i$$

$$= (-1)^{35} \cdot i$$

$$= -i$$

2. $y = a(0.5)^{t/h}$

$$y = 4.2(0.5)^{29/32}$$

$$y = 2.24 \text{ mg}$$

3.

$$\frac{(5-3i)(2-3i)}{(2+3i)(2-3i)} = \frac{10-15i-6i+9i^2}{13} = \frac{1-21i}{13}$$

4. $y = P(1 + \frac{r}{n})^{nt}$

$$1400 = 700(1 + \frac{0.048}{12})^{12t}$$

$$t = 14.5 \text{ years}$$

5. $(5+2i)(2-3i)$

$$10 - 15i + 4i - 6i^2$$

$$= 10 - 11i + 6$$

$$= 16 - 11i$$

10. $6x^2 + 280 = 64$

$$6x^2 = -216$$

$$x^2 = -36$$

$$x = \pm 6i$$

6. $y = Pe^{rt}$

$$24085 = Pe^{(0.063)(5)}$$

$$y = \$17,576.97$$

8. $\log_4(2x+12) = 2$

$$4^2 = 2x+12$$

$$16 = 2x+12$$

$$4 = 2x$$

$$x = 2$$

11. $2x^{4/5} + 12 = 44$

$$2x^{4/5} = 32$$

$$x^{4/5} = 16$$

$$x = 16^{5/4}$$

$$x = 32$$

7. $\log_5 15625 = 50x + 25$

$$\frac{\log 15625}{\log 5} = 50x + 25$$

$$6 = 50x + 25$$

$$-19 = 50x$$

$$x = -0.38$$

9. $5^{6x+18} = 25^{6x}$

$$5^{6x+18} = 5^{2(6x)}$$

$$6x+18 = 12x$$

$$18 = 6x$$

$$x = 3$$