LTAA 7a | How do I simplify i?

5/11

$\sqrt{3}\cdot\sqrt{3}$

3

Patterns of i

$i^4 \cdot i^1$

$i = \sqrt{-1}$

$i^2 = \sqrt{-1}\cdot\sqrt{-1} = -1$

$i^3 = \sqrt{-1}\cdot\sqrt{-1}\cdot\sqrt{-1} = -i$

$i^4 = \sqrt{-1}\cdot\sqrt{-1}\cdot\sqrt{-1}\cdot\sqrt{-1} = 1$

$i^5 = 1\cdot i = i$

$i^6 = 1\cdot -1 = -1$

$i^7 = -1\cdot i = -i$

$i^8 = 1$

$i = \sqrt{-1}$ R1, .25

$i^2 = -1$ R2, .5

$i^3 = -i$ R3, .75

$i^4 = 1$ Goes in evenly

$i^{17} = \frac{17}{4} = 4.25 = i$

$i^{120} = 1$ $i^{64002} = -1$