

Complex Number 3

Calculate:

$$i^2 =$$

$$i^4 =$$

$$(1+i)^4 =$$

Example: $(1+i)(1-i) = 1-i^2 = 2$

$$(2+i)(2-i) =$$

$$\frac{3-3i}{3} =$$

$$\frac{-4i}{8} =$$

$$\frac{1+i}{1-i} = \frac{2i}{2} = i$$

$$\sqrt{-4} =$$

$$\sqrt{-25} =$$

$$\pm\sqrt{-36} =$$

Solve the equation:

(1) $x^2 + 1 = 0$

(2) $x^2 + 4 = 0$

(3) $x^2 + i.x = 0$

(4) $(x + 4)^2 = -1$

(5) $(x - 3)^2 = -25$