

Quiz 1

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1 Chapter P

Question 1 Simplify the expression and enter your answer in the box below

$$\frac{1}{8^{-1/3}}$$

Question 2 Recall that $i = \sqrt{-1} = (-1)^{1/2}$. Then the expression

$$i^6 - i^{35}$$

simplifies to which of the following

- A i
- B $-i$
- C $-1-i$
- D $-1+i$
- E can't be simplified

Question 3 Factor the polynomial

$$x^5 - x$$

over the real numbers, that is, write the polynomial as a product of irreducible polynomials of smaller degree. (factor is as much as you can). What do you obtain:

- A $x(x^4 - 1)$
- B $x(x + 1)(x - 1)$
- C $x(x + 1)^2(x - 1)$
- D $x(x^2 + 1)(x + 1)(x - 1)$
- E $x(x^2 + 1)(x - 1)$