



imtiaz
منصة إمتياز التعليمية

Math1 (105)

CHAPTER 1

Simplify $(2x + 5y) + (3x - 2y)$

Simplify $(x^3 + 3x^2 + 5x - 4) - (3x^3 - 8x^2 - 5x + 6)$

Simplify $(X + 2)(x^3 + 3x^2 + 4x - 17)$

Divide $2x^3 + 5x^2 + 28$ by $x + 4$ using the long division

Divide $x^3 - 5x^2 - 4x + 23$ by $x - 2$ using the long division

Factor each of the following

● $4x^2 - 2xy$

● $X^2 - 3x - 10$

● $10xy + 15xy^2$

● $10y^2 + 23y + 12$

● $36a^2 - 49b^2$

● $8x^3 + 1$

● $25p^2 - 16v^4$

● $X^6 - 64$

Simplify the following

● $(2 + 3i) - (5 - 8i)$

● $(2 + 3i)(4 - 5i)$

● $(3 - 2i)^2$

Simplify the following

● $\frac{2 - 3i}{5 + 2i}$

● $\frac{4 + 3i}{-1 + 2i}$

Choose the correct answer

Simplify $(6xy^2)^2 (2x^2y)^{-1}$

- A. $(12x^3y^3)^{-2}$
- B. $12xy$
- C. Xy
- D. $18y^3$

Simplify and express in correct scientific notation $(5.38 \times 10^7) (23.1 \times 10^{-4})t$

- A. 124278
- B. 124.278
- C. 1.24278
- D. 1.24278×10^3

Multiply and divide as indicated then write your answer in
Correct scientific notation

$$\frac{(8.25 \times 10^{-11})(4.78 \times 10^2)}{3.08 \times 10^{-5}}$$

- A. 12.8×10^{-4}
- B. 1.28×10^{-3}
- C. 1.28×10^{-4}
- D. 0.128×10^{-3}

Factor $5x^2 - 20$

- A. $(5x - 4)(x + 5)$
- B. $(5x - 2)(x + 10)$
- C. $(x - 4)(x + 5)$
- D. $5(x - 2)(x + 2)$

Multiply $(x^2 - y)(x^2 + y) =$

- A. $x^4 + y^4$
- B. $x^4 - y^4$
- C. $x^4 + y^2$
- D. $x^4 - y^2$

Simplify $(-8x^2y^2)^{-1}(4xy^2)^2 =$

- A. $16x^3$
- B. $-2y^2$
- C. $-xy^3$
- D. $-32xy^5$

Multiply and simplify

$$\sqrt[3]{2x^4} \sqrt[3]{4x^5} =$$

- A. $8x^9$
- B. $8x^3$
- C. $2x^3$
- D. $6x^6$

Write $2 - \sqrt{-9}$

- A. $2 - 9i$
- B. $2 + 9i$
- C. $2 - 3i$
- D. $2 + 3i$

Simplify $(5 - i) - (2 + 2i)$

- A. $3 - 3i$
- B. $3 - i$
- C. $7 - 3i$
- D. $7 - i$

Simplify $(1 - 2i)(1 + i)$

- A. $3 - i$
- B. $-1 - i$
- C. $2 - 2i$
- D. $1 - 2i$

Divide $\frac{1 - 2i}{3i}$ and write your answer in standard form $a + bi$

- A. $\frac{1}{3} - \frac{2}{3}i$ C. $-\frac{2}{3} + \frac{1}{3}i$
B. $-\frac{2}{3} - \frac{1}{3}i$ D. $\frac{2}{3} + \frac{1}{3}i$

Simplify i^{50} using powers of i :

- A. i
B. $-i$
C. -1
D. 1

If $f(x) = -6 + \sqrt{x^2 + 9}$, then $f(0) =$

- A. $\sqrt{3}$
B. 3
C. -3
D. -9



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