

Name:

Date: Score:

Operations with Polynomials

Perform the indicated operation(s)

① $(8b - 2)(3b^2 + 2b - 2)$

② $(3x^2 - 2x + 1) + (-x^2 + 3x + 1)$

③ $(-3m^2 + m) + (4m^2 + 6m)$

④ $(7a^2 - a + 4) - (3a^2 - 4a - 3)$

⑤ $(-3x^2 + 6x^3 - 4 - x) \div (2x + 1)$

⑥ $2a(5a^2 + 8a + 8)$

⑦ $(-18p^2 + p - 32) - (40 - 13p^2)$

⑧ $-8w^2y + (4w^2y^4 - w^4)$

⑨ $(x - 2)(x^2 - x + 3)$

⑩ $(5x^3 - 13x^2 - 7) + (16x^3 + 8x^2 - x + 15)$

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Operations with Polynomials

Answers

① $(8b - 2)(3b^2 + 2b - 2)$

$$24b^3 + 10b^2 - 20b + 4$$

② $(3x^2 - 2x + 1) + (-x^2 + 3x + 1)$

$$2x^2 + x + 2$$

③ $(-3m^2 + m) + (4m^2 + 6m)$

$$m^2 + 7m$$

④ $(7a^2 - a + 4) - (3a^2 - 4a - 3)$

$$4a^2 + 3a + 7$$

⑤ $(-3x^2 + 6x^3 - 4 - x) \div (2x + 1)$

$$3x^2 - 3x + 1 - \frac{5}{2x + 1}$$

⑥ $2a(5a^2 + 8a + 8)$

$$10a^3 + 16a^2 + 16a$$

⑦ $(-18p^2 + p - 32) - (40 - 13p^2)$

$$-5p^2 + p + 72$$

⑧ $-8w^2y + (4w^2y^4 - w^4)$

$$w^2(-8y + 4y^4 - w^2)$$

⑨ $(x - 2)(x^2 - x + 3)$

$$x^3 - 3x^2 + 5x - 6$$

⑩ $(5x^3 - 13x^2 - 7) + (16x^3 + 8x^2 - x + 15)$

$$21x^3 - 5x^2 - x + 8$$