Multiplying Three Binomials

Multiply and simplify each expression.

① $(x + 5)(x + 3)(x + 7)$

② $(x - 1)(x - 2)(x - 3)$

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③ $(x - 4)(x + 6)(x + 2)$

④ $(y + 3)(y - 3)(y + 3)$

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⑤ $(x - 3)(4x - 7)(2x + 8)$

⑥ $(-y - 2)(y - 7)(-5 - y)$

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⑦ $(2y + 7)(y - 7)(y + 7)$

⑧ $(5 - y)(y - 3)(y + 4)$

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MATH MONKS

Multiplying Three Binomials

Answers

① $(x + 5)(x + 3)(x + 7)$

② $(x - 1)(x - 2)(x - 3)$

$x^3 + 15x^2 + 71x + 105$

$x^3 - 6x^2 + 11x - 6$

③ $(x - 4)(x + 6)(x + 2)$

④ $(y + 3)(y - 3)(y + 3)$

$x^3 + 4x^2 - 20x - 48$

$y^3 + 3y^2 - 9y - 27$

⑤ $(x - 3)(4x - 7)(2x + 8)$

⑥ $(-y - 2)(y - 7)(-5 - y)$

$8x^3 - 6x^2 - 110x + 168$

$y^3 - 39y - 70$

⑦ $(2y + 7)(y - 7)(y + 7)$

⑧ $(5 - y)(y - 3)(y + 4)$

$2y^3 + 7y^2 - 98y - 343$

$-y^3 + 4y^2 + 17y - 60$