

Name: \_\_\_\_\_

## Cube of a Binomial

Solve for each special product

①  $(3x + 2y)^3$

②  $(x^2 - 2)^3$

③  $(x - 2y)^3$

④  $(8x - 3y)^3$

⑤  $(6x + 8y)^3$

⑥  $(7x + 2y)^3$

⑦  $(2x - 3y)^3$

⑧  $(x - 4y)^3$

⑨  $(x^2 + y^2)^3$

⑩  $(6x - 5y)^3$

⑪  $(x^2 - 2y)^3$

⑫  $(2x - 1)^3$

⑬  $(4x + 3y)^3$

⑭  $(x + 3)^3$

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## Cube of a Binomial

### Answers

①  $(3x + 2y)^3$

$$27x^3 + 54x^2y + 36xy^2 + 8y^3$$

③  $(x - 2y)^3$

$$x^3 - 6x^2y + 12xy^2 - 8y^3$$

⑤  $(6x + 8y)^3$

$$216x^3 + 864x^2y + 1152xy^2 + 512y^3$$

⑦  $(2x - 3y)^3$

$$8x^3 - 36x^2y + 54xy^2 - 27y^3$$

⑨  $(x^2 + y^2)^3$

$$x^6 + 3x^4y^2 + 3x^2y^4 + y^6$$

⑪  $(x^2 - 2y)^3$

$$x^6 - 6x^4y + 12x^2y^2 - 8y^3$$

⑬  $(4x + 3y)^3$

$$64x^3 + 144x^2y + 108xy^2 + 27y^3$$

②  $(x^2 - 2)^3$

$$x^6 - 6x^4 + 12x^2 - 8$$

④  $(8x - 3y)^3$

$$512x^3 - 576x^2y + 216xy^2 - 27y^3$$

⑥  $(7x + 2y)^3$

$$343x^3 + 294x^2y + 84xy^2 + 8y^3$$

⑧  $(x - 4y)^3$

$$x^3 - 12x^2y + 48xy^2 - 64y^3$$

⑩  $(6x - 5y)^3$

$$216x^3 - 540x^2y + 450xy^2 - 125y^3$$

⑫  $(2x - 1)^3$

$$8x^3 - 12x^2 + 6x - 1$$

⑭  $(x + 3)^3$

$$x^3 + 9x^2 + 27x + 27$$