

Pascal's Triangle and Binomial Expansion

Expand each binomial using Pascal's triangle. One is done for you.

1 $(a + b)^4$

2 $(3x - 4)^3$

Pascal's Triangle

Binomial Expansion

1

$(a + b)^0 =$

1

1 1

$(a + b)^1 =$

$a + b$

1 2 1

$(a + b)^2 =$

$a^2 + 2ab + b^2$

1 3 3 1

$(a + b)^3 =$

$a^3 + 3a^2b + 3ab^2 + b^3$

1 4 6 4 1

$(a + b)^4 = a^4 + 4a^3b + 6a^2b^2 + 4ab^3 + b^4$

3 $(5x - 2)^4$

4 $(2x - 3y)^4$

Pascal's Triangle and Binomial Expansion

Answers

1 $(a + b)^4$

Pascal's Triangle

1

$(a + b)^0 =$

1

1 1

$(a + b)^1 =$

$a + b$

1 2 1

$(a + b)^2 =$

$a^2 + 2ab + b^2$

1 3 3 1

$(a + b)^3 =$

$a^3 + 3a^2b + 3ab^2 + b^3$

1 4 6 4 1

$(a + b)^4 = a^4 + 4a^3b + 6a^2b^2 + 4ab^3 + b^4$

3 $(5x - 2)^4$

$625x^4 - 1000x^3 + 600x^2 - 160x + 16$

2 $(3x - 4)^3$

$27x^3 - 108x^2 + 144x - 64$

4 $(2x - 3y)^4$

$16x^4 - 96x^3y + 216x^2y^2 - 216xy^3 + 81y^4$