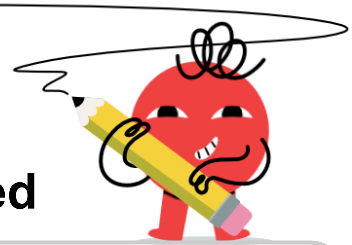
Name ______________________

Binomial Theorem - Polynomial with Integer and Triangle to Partly Expanded Polynomial



1 Use Pascal's triangle to write the partly-expanded form (leave each power un-evaluated).

1
1 1
1 2 1
1 3 3 1
1 4 6 4 1
1 5 10 10 5 1

$$(y-3)^2$$

A $1y^2+3\cdot(-3)^1y+3\cdot(-3)^2$

B $1y^2+2\cdot(-3)^1y+1\cdot(-3)^2$

C $1y^2+1\cdot(-3)^1y+0\cdot(-3)^2$

2 Use Pascal's triangle to write the partly-expanded form (leave each power un-evaluated).

1
1 1
1 2 1
1 3 3 1
1 4 6 4 1
1 5 10 10 5 1

$$(y+3)^2$$

A $1y^2+2\cdot(3)^1y+1\cdot(3)^2$

B $1y^2+1\cdot(3)^1y+0\cdot(3)^2$

C $1y^2+3\cdot(3)^1y+3\cdot(3)^2$

3 Use Pascal's triangle to write the partly-expanded form (leave each power un-evaluated).

1
1 1
1 2 1
1 3 3 1
1 4 6 4 1
1 5 10 10 5 1

$$(z-2)^2$$

A $1z^2+2\cdot(-2)^1z+1\cdot(-2)^2$

B $1z^2+3\cdot(-2)^1z+3\cdot(-2)^2$

C $1z^2+1\cdot(-2)^1z+0\cdot(-2)^2$

4 Use Pascal's triangle to write the partly-expanded form (leave each power un-evaluated).

1
1 1
1 2 1
1 3 3 1
1 4 6 4 1
1 5 10 10 5 1

$$(w+3)^3$$

A $1w^3+3\cdot(3)^1w^2+3\cdot(3)^2w+1\cdot(3)^3$

B $1w^3+2\cdot(3)^1w^2+1\cdot(3)^2w+0\cdot(3)^3$

C $1w^3+4\cdot(3)^1w^2+6\cdot(3)^2w+4\cdot(3)^3$

5 Use Pascal's triangle to write the partly-expanded form (leave each power un-evaluated).

1
1 1
1 2 1
1 3 3 1
1 4 6 4 1
1 5 10 10 5 1

$$(x-2)^3$$

A $1x^3+4\cdot(-2)^1x^2+6\cdot(-2)^2x+4\cdot(-2)^3$

B $1x^3+3\cdot(-2)^1x^2+3\cdot(-2)^2x+1\cdot(-2)^3$

C $1x^3+2\cdot(-2)^1x^2+1\cdot(-2)^2x+0\cdot(-2)^3$

6 Use Pascal's triangle to write the partly-expanded form (leave each power un-evaluated).

1
1 1
1 2 1
1 3 3 1
1 4 6 4 1
1 5 10 10 5 1

$$(q-3)^3$$

A $1q^3+2\cdot(-3)^1q^2+1\cdot(-3)^2q+0\cdot(-3)^3$

B $1q^3+3\cdot(-3)^1q^2+3\cdot(-3)^2q+1\cdot(-3)^3$

C $1q^3+4\cdot(-3)^1q^2+6\cdot(-3)^2q+4\cdot(-3)^3$

7 Use Pascal's triangle to write the partly-expanded form (leave each power un-evaluated).

1
1 1
1 2 1
1 3 3 1
1 4 6 4 1
1 5 10 10 5 1

$$(z+2)^2$$

A $1z^2+1\cdot(2)^1z+0\cdot(2)^2$

B $1z^2+3\cdot(2)^1z+3\cdot(2)^2$

C $1z^2+2\cdot(2)^1z+1\cdot(2)^2$