**Math 30-1 Binomial Theorem Worksheet**

1. Expand each binomial and express in simplest form:

a) 

b) 

c) 

1. Determine an expression for the 6th term in the expansion of in simplified form.
2. The sixth term in the expansion of can be expressed as

|  |  |  |  |
| --- | --- | --- | --- |
| a. | b. | c. | d. |

1. The numerical coefficient of the middle term in the expansion of can be expressed as

|  |  |  |  |
| --- | --- | --- | --- |
| a. | b. | c. | d. |

1. The first three terms of the expansion of are

|  |  |  |  |
| --- | --- | --- | --- |
| a. | b. | c. | d. |
|  |  |  |  |

1. The simplified form of the 3rd term in the expansion of is

|  |  |  |  |
| --- | --- | --- | --- |
| a. | b. | c. | d. |

1. The coefficient of in the expansion of is

|  |  |  |  |
| --- | --- | --- | --- |
| a. | b. | c. | d. There is not term containing |

1. Determine an expression in simplified form for the next to last term of the expansion of .
2. The general term for the expansion of is

|  |  |  |  |
| --- | --- | --- | --- |
| a. 4● | b. | c. | d. |

1. If the expansion of  has 18 terms, what is the value of *n*?
2. If the expansion of  has 18 terms, what is the value of *n*?
3. If there are 17 terms in the expansion of , then

|  |  |  |  |
| --- | --- | --- | --- |
| a. n = 5 | b. n = 18 | c. n = 7 | d. |

1. The fifth term of the expansion of

|  |  |  |  |
| --- | --- | --- | --- |
| a. | b. | c. | d. |

1. One term in the expansion of  . Determine an expression for *m*.
2. A term of the expansion of , where *a* > 0, is . Determine the value of *a*.
3. The constant term in the expansion of is the

|  |  |  |  |
| --- | --- | --- | --- |
| a. 9th term | b. 13th term | c. 8th term | d. 5th term |

1. What is the value of the constant term in the expansion of ?

|  |  |  |  |
| --- | --- | --- | --- |
| a. 120 | b. 210 | c. 252 | d. 300 |

1. What is the value of the constant term in the expansion of ?
2. What is the sum of the ninth row of Pascal’s Triangle?
3. What is the sum of the coefficients in the expansion of ?