
Name: _____

QUIZ 11 ♠

MATH 211
February 23, 2023

1. Expand and simplify: $(1 + a)^5 =$

2. Use the binomial theorem to show why $3^n = 2^0 \binom{n}{0} + 2^1 \binom{n}{1} + 2^2 \binom{n}{2} + 2^3 \binom{n}{3} + \cdots + 2^n \binom{n}{n}$

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QUIZ 11 ♦

MATH 211
February 23, 2023

1. Expand and simplify: $(a + 2)^4 =$

2. Use the binomial theorem to show why $4^n = 3^0 \binom{n}{0} + 3^1 \binom{n}{1} + 3^2 \binom{n}{2} + 3^3 \binom{n}{3} + \cdots + 3^n \binom{n}{n}$

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QUIZ 11 ♣

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February 23, 2023

1. Expand and simplify: $(1 + a)^6 =$

2. Use the binomial theorem to show why $2^n = \binom{n}{0} + \binom{n}{1} + \binom{n}{2} + \binom{n}{3} + \cdots + \binom{n}{n}$

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QUIZ 11 ♥

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1. Expand and simplify: $(a + 2)^4 =$

2. Use the binomial theorem to show why $3^n = 2^0 \binom{n}{0} + 2^1 \binom{n}{1} + 2^2 \binom{n}{2} + 2^3 \binom{n}{3} + \cdots + 2^n \binom{n}{n}$