Sum/Diff Quiz

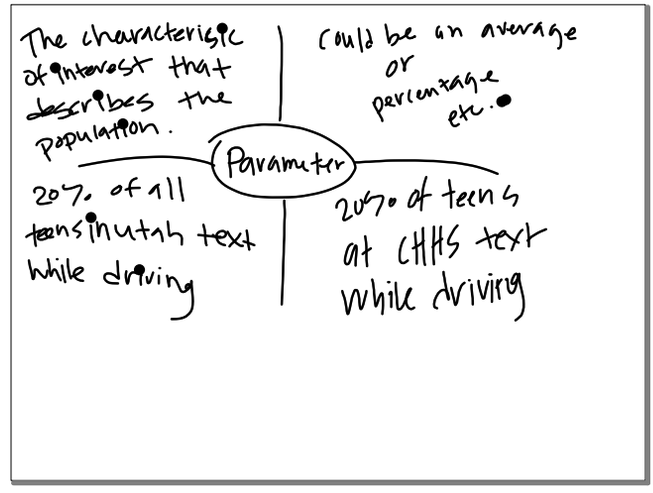
Homework Questions

Calendar Math

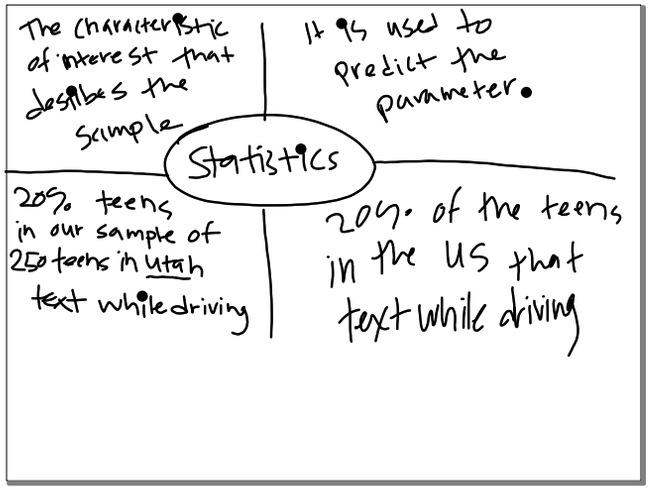
1.4 Binomial Theorem

HW 1.4 Binomial Theorem Worksheet #1-10

Aug 31-2:46 PM



Sep 1-7:52 AM



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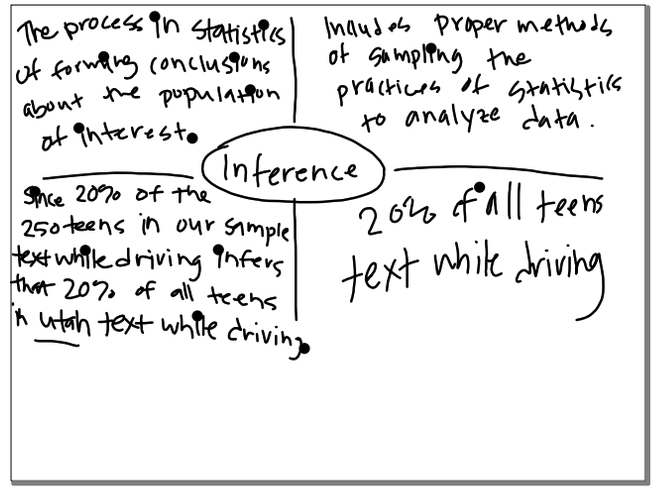

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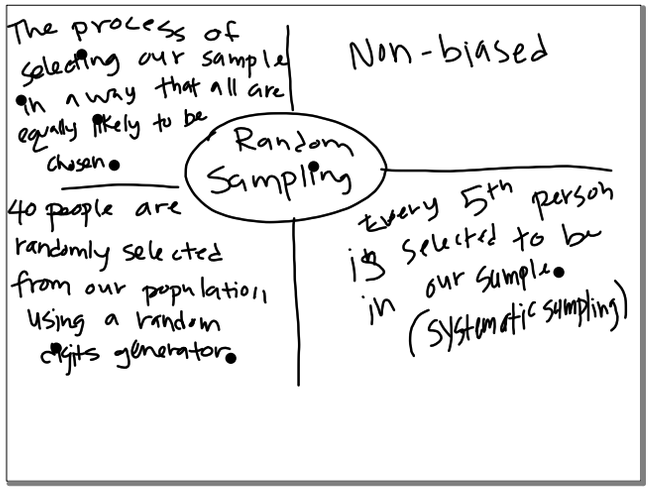

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Homework Questions...

'29) $6x^3 - 13x^2 - 63x$

$x(6x^2 - 13x - 63)$ (a, b, c)

$x(6x - 27)(6x + 14)$ (3, 3, 2, 2)

$x(2x - 9)(3x + 7)$

-378, -27, 14, -13

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25) $x^3 - 36x$

$x(x^2 - 36)$

$x(x+6)(x-6)$

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20) $64m^3 + 1$

$(4m+1)(16m^2 - 4m + 1)$

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19) $27y^3 - 8$

$\sqrt[3]{27}$ $\sqrt[3]{8}$

3 2

$(3y)^2$

$(3y-2)(9y^2 + 6y + 4)$

Sep 1-8:15 AM

18) $27x^3 + 64$

3 4

$(3x+4)(9x^2 - 12x + 16)$

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11) $9n^2 + 16$

$(3n + 4i)(3n - 4i)$

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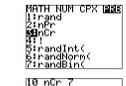
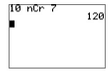
Binomial Theorem: a formula for finding any power of a binomial without multiplying at length.



Calculator: nCr or n choose r



Skip the 1st term

Start with 0

Pascal's Triangle: is a triangle of numbers where each number is the two numbers above it added together (except for the edges, which are all "1").

$(a+b)^0 = 1$

$(a+b)^1 = a+b$

$(a+b)^2 = a^2 + 2ab + b^2$

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

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

$(a+b)^5 = a^5 + 5a^4b + 10a^3b^2 + 10a^2b^3 + 5ab^4 + b^5$

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$(b+2)^4$

$a=b$

$b=2$

$a^4=b^4$

$4a^3b = 4(b^3)(2) = 8b^3$

$6a^2b^2 = 6(b^2)(4) = 24b^2$

#1 – 10

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Examples

Expand $(x+4)^4$

$a=x$

$b=4$

$a^4 = x^4$

$4a^3b = 4(x^3)(4) = 16x^3$

$6a^2b^2 = 6(x^2)(16) = 96x^2$

$4ab^3 = 4(x)(64) = 256x$

$b^4 = (4)^4 = 256$

x^4	$16x^3$	$96x^2$
$256x$	256	

$x^4 + 16x^3 + 96x^2 + 256x + 256$

1 2 3 4 5

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