

Pre-Calculus 11 Start Up Assignment

Please answer all questions on this sheet and remember to show all your work for full marks!

Factor completely the following questions:

Note: If a question cannot be factored, state "prime" or "non-factorable" and explain the reason with words. (For example, no two numbers can be found such that they will multiply to ... and add to ...)

1) $x^2 + 4x - 21$

2) $x^2 - 9x + 10$

3) $-x^2 + x + 20$

4) $m^2 + 5mn - 6n^2$

5) $2x^2 - 98y^2$

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6) $12 - 11x + 2x^2$

7) $3x^4 - 8x^3 + 4x^2$

8) $9x^2 + 42xy - 15y^2$

9) $32m^4n^3 + 16m^3n^4 + 2m^2n^5$

Questions #10 – 12 are meant for students to apply substitution on factoring. Marks will be lost if students do not properly factor with substitution. For more practice questions on this, see Content -> Getting Started -> Task 3 -> Extra Practice Questions on Harder Factoring Cases

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10) $2(x + 7)^2 - 5(x + 7) - 25$

let $y = x + 7$ and continue to factor

11) $6(2x - 1)^2 + 34(2x - 1) + 20$

*let ____ = _____

12) $(m - n)^2 + 2(m - n) + 1$

*let $y = m - n$ and continue to factor