

Factor the following problems **COMPLETELY**. Show all steps if it can be factored more than once.
PUT FINAL ANSWER IN SPACE PROVIDED. This is graded for ACCURACY!

_____ 1. $6x^2 + x - 7$

_____ 2. $4x^2 - 16x + 15$

_____ 3. $6x^2 + 23x - 18$

_____ 4. $12x^2 - 19x - 10$

_____ 5. $25x^2 - 40x + 16$

_____ 6. $6x^2 - 216$

_____ 7. $20x^2 - 37x - 6$

_____ 8. $x^6 - 81x^2$

_____ 9. $x^4 - 18x^2 + 81$

_____ 10. $6x^3 - 22x^2 - 8x$

Find the domain for each of the following functions:

_____ 11. $f(x) = \sqrt{10 - x}$

_____ 12. $f(x) = 2\sqrt{2x + 5}$

_____ 13. $f(x) = \frac{2x}{3x^2 - 5x - 12}$

_____ 14. $f(x) = x^2 - 8x + 7$

_____ 15. $f(x) = \frac{1}{x^2 + 10x + 21}$

_____ 16. $f(x) = \sqrt{x^2 - 4}$