Factor the following expressions using the Difference of Squares Formula : $a^2 - b^2 = (a+b)(a-b)$

1. $x^2 - 100$ Answer :_____

2. $9 - x^2$ Answer :_____

3. $x^2 - 36$ Answer :_____

4. $121 - x^2$ Answer :_____

The following 5 problems will need to be factored twice. First you'll factor out the GCF, then you'll factor using a difference of squares.

5. $3x^3 - 75x$ 7. $2x^2 - 242$

6. $5x^4 - 80x^2$ 8. $3x^5 - 27x$