

Factor the following completely

1. $x^{1/2} - x^{5/2}$

2. $x^{-1/2}(x+3)^{1/2} + x^{1/2}(x+3)^{-1/2}$

3. $x^{3/2} + 8x^{1/2} + 15x^{-1/2}$

4. $2x^{1/2} + 5x^{-1/2} + 2x^{-3/2}$

5. $(x+2)^{7/2} - (x+2)^{3/2}$

6. $4(x+1)^{1/2} - 5(x+1)^{3/2} + (x+1)^{5/2}$

7. $x^{1/2} - 3x^{1/3} - 3x^{1/6} - 9$

8. $12x^{4/3} - 5x^{2/3} - 2$

9. $x^{3/5} + 5x^{2/5} - 3x^{1/5} - 15$

10. $e^{2x} - 3e^x + 2$

11. $e^{4x} + 5e^{2x} - 24$

12. $(x-5)^{-\frac{1}{2}}(x+5)^{-\frac{1}{2}} - (x+5)^{\frac{1}{2}}(x-5)^{-\frac{3}{2}}$