Powers of sine or cosine – Evaluate the following integrals

1. $\int \cos^5 x \ dx =$

2. $\int \sin^4 x \ dx =$

3. $\int \sin^3 x \ dx =$

4. $\int \sin^4 x \cos^2 x \ dx =$

5. $\int \dfrac{\sin^3 x}{\cos^2 x} dx =$

6. $\int \sin^3 x \cos^3 x \ dx =$

Partial Fractions – Evaluate the following integrals

7. $\int \dfrac{3x}{x^2 + 2x - 8}\,dx =$

8. $\int \dfrac{3x^2 + 7x - 2}{x^3 - x^2 - 2x}\,dx =$

9. $\int \dfrac{3x^2 + 2x + 5}{(x - 1)(x^2 - x - 20)}\,dx =$

10. $\int \dfrac{5x^2 - 3x + 2}{x^3 - 2x^2}\,dx =$

11. $\int \dfrac{10}{(x - 2)^2(x^2 + 2x + 2)}\,dx =$