Answer key

The method: Antiderivatives

Raise each power by 1 and divide by the new power. Add + C.

$$\int (-5x^3 - x^2 + 3x + 5)\,dx = -\frac{5x^4}{4} - \frac{x^3}{3} + \frac{3x^2}{2} + 5x + C$$

raise each power by 1 and divide by the new power; add C

$\int x^n\,dx = x^{n+1} \div (n+1) + C$

$$-\frac{5x^4}{4} - \frac{x^3}{3} + \frac{3x^2}{2} + 5x + C$$

$$\int (-6x^2 - 8x + 1)\,dx = -2x^3 - 4x^2 + x + C$$

raise each power by 1 and divide by the new power; add C

$\int x^n\,dx = x^{n+1} \div (n+1) + C$

$$-2x^3 - 4x^2 + x + C$$

$$\int (4x - 6)\,dx = 2x^2 - 6x + C$$

raise each power by 1 and divide by the new power; add C

$\int x^n\,dx = x^{n+1} \div (n+1) + C$

$$2x^2 - 6x + C$$

Problems 1 and 2 worked out · Version 0A

$$\int (-4x + 5)\,dx = -2x^2 + 5x + C$$

raise each power by 1 and divide by the new power; add C

$\int x^n\,dx = x^{n+1} \div (n+1) + C$

$$-2x^2 + 5x + C$$

$$\int (-4x - 1)\,dx = -2x^2 - x + C$$

raise each power by 1 and divide by the new power; add C

$\int x^n\,dx = x^{n+1} \div (n+1) + C$

$$-2x^2 - x + C$$

Antiderivatives · Version 0A

1) $-2x^2 + 5x + C$ 2) $-2x^2 - x + C$

3) $\frac{5x^3}{3} - 3x^2 + 3x + C$ 4) $\frac{2x^3}{3} + 3x^2 - 7x + C$

5) $\frac{5x^2}{2} + 3x + C$ 6) $-\frac{x^4}{4} - x^3 - 3x^2 + 3x + C$

7) $-\frac{2x^3}{3} - 3x^2 - 2x + C$ 8) $-x^3 - 3x^2 + 9x + C$

9) $-\frac{3x^4}{4} - \frac{5x^3}{3} - \frac{7x^2}{2} - 8x + C$

Answer key

10) $-2x^3 + 4x^2 - 9x + C$ 11) $-2x^3 - \frac{7x^2}{2} - 9x + C$

12) $\frac{x^2}{2} + 8x + C$ 13) $\frac{5x^4}{4} + 2x^3 + \frac{9x^2}{2} - 8x + C$

14) $\frac{2x^3}{3} - 2x^2 - 8x + C$ 15) $3x^2 + 4x + C$