

Calculus Missing Coefficients Practice #2

Calculate the missing coefficient(s):

1. $20x^3 - 4x^2 + kx - 1$ if $(5x - 1)$ is a factor
2. $100x^3 + kx^2 + 284x + 123$ if $(25x^2 + 40x + 41)$ is a factor
3. $ax^3 + 36x^2 + 124x + 476$ if $(x + 7)$ is a factor
4. $2x^3 + ax^2 + bx - 78$ if $(x^2 + 2x + 26)$ is a factor
5. $48x^3 + 16x^2 + 55x + k$ if $(3x - 2)$ is a factor
6. $80x^3 + ax^2 + bx + 455$ if $(16x^2 + 32x + 65)$ is a factor
7. $100x^3 + kx^2 + 64x - 48$ if $(4x - 3)$ is a factor
8. $ax^3 - 50x^2 - 55x + b$ if $(25x^2 - 30x + 13)$ is a factor
9. $80x^3 + kx^2 + 157x + 25$ if $(5x + 1)$ is a factor
10. $8x^3 + 28x^2 + kx + 85$ if $(4x^2 + 4x + 17)$ is a factor

Calculate the other factors:

11. $2x^3 - 31x^2 + 43x + k$ if $(x - 11)$ is one factor
12. $12x^3 + 113x^2 + kx - 56$ if $(4x - 1)$ is one factor
13. $15x^3 + kx^2 - 30x - 16$ if $(3x + 8)$ is one factor
14. $kx^3 + 44x^2 + 141x + 126$ if $(x + 6)$ is one factor
15. $12x^3 + kx^2 + 183x + 90$ if $(x + 6)$ is one factor
16. $24x^3 - 59x^2 + kx - 56$ if $(8x + 7)$ is one factor
17. $9x^3 - 66x^2 - 491x + k$ if $(x - 12)$ is one factor
18. $3x^3 - 40x^2 + kx + 96$ if $(3x + 2)$ is one factor
19. $14x^3 + kx^2 + 77x - 60$ if $(x + 4)$ is one factor
20. $16x^3 + 130x^2 + 13x + k$ if $(2x + 1)$ is one factor

Answers: Calculus Missing Coefficients Practice #2

Calculate the missing coefficient(s):

1. $20x^3 - 4x^2 + 5x - 1 = (5x - 1)(4x^2 + 1)$
2. $100x^3 + 235x^2 + 284x + 123 = (4x + 3)(25x^2 + 40x + 41)$
3. $4x^3 + 36x^2 + 124x + 476 = (x + 7)(4x^2 + 8x + 68)$
4. $2x^3 + 1x^2 + 46x - 78 = (2x - 3)(x^2 + 2x + 26)$
5. $48x^3 + 16x^2 + 55x - 58 = (3x - 2)(16x^2 + 16x + 29)$
6. $80x^3 + 272x^2 + 549x + 455 = (5x + 7)(16x^2 + 32x + 65)$
7. $100x^3 - 75x^2 + 64x - 48 = (4x - 3)(25x^2 + 16)$
8. $125x^3 - 50x^2 - 55x + 52 = (5x + 4)(25x^2 - 30x + 13)$
9. $80x^3 + 176x^2 + 157x + 25 = (5x + 1)(16x^2 + 32x + 25)$
10. $8x^3 + 28x^2 + 54x + 85 = (2x + 5)(4x^2 + 4x + 17)$

Calculate the other factors:

11. $2x^3 - 31x^2 + 43x + 616 = (x - 11)(2x + 7)(x - 8)$
12. $12x^3 + 113x^2 + 195x - 56 = (4x - 1)(x + 7)(3x + 8)$
13. $15x^3 + 31x^2 - 30x - 16 = (3x + 8)(5x + 2)(x - 1)$
14. $4x^3 + 44x^2 + 141x + 126 = (x + 6)(2x + 7)(2x + 3)$
15. $12x^3 + 100x^2 + 183x + 90 = (x + 6)(6x + 5)(2x + 3)$
16. $24x^3 - 59x^2 - 134x - 56 = (8x + 7)(x - 4)(3x + 2)$
17. $9x^3 - 66x^2 - 491x - 156 = (x - 12)(3x + 1)(3x + 13)$
18. $3x^3 - 40x^2 + 116x + 96 = (3x + 2)(x - 8)(x - 6)$
19. $14x^3 + 79x^2 + 77x - 60 = (x + 4)(7x + 15)(2x - 1)$
20. $16x^3 + 130x^2 + 13x - 24 = (2x + 1)(x + 8)(8x - 3)$