

Calculus Factorising Practice #1

Factorise to whole number terms

1. $12x^3 - 8x^2 - 293x - 143$
2. $24x^3 + 94x^2 + 75x - 25$
3. $18x^3 + 123x^2 + 272x + 192$
4. $21x^3 - 76x^2 - 640x - 768$
5. $6x^3 + 11x^2 - 126x + 144$
6. $10x^3 + 61x^2 + 116x + 65$
7. $15x^3 + 134x^2 + 211x + 56$
8. $12x^3 - 29x^2 - 97x + 84$
9. $16x^3 + 78x^2 + 99x + 27$
10. $30x^3 + x^2 - 287x - 294$

11. $18x^3 + 9x^2 - 293x - 504$
12. $12x^3 + 16x^2 - 81x + 35$
13. $16x^3 + 100x^2 + 184x + 105$
14. $30x^3 + 121x^2 + 141x + 44$
15. $12x^3 + 28x^2 - 49x - 30$
16. $42x^3 + 169x^2 + 204x + 65$
17. $9x^3 + 9x^2 - 40x - 28$
18. $32x^3 - 12x^2 - 464x - 585$
19. $18x^3 + 27x^2 - 32x - 13$
20. $21x^3 + 149x^2 + 338x + 240$

Answers: Calculus Factorising Practice #1

1. $12x^3 - 8x^2 - 293x - 143 = (3x + 13)(2x - 11)(2x + 1)$
2. $24x^3 + 94x^2 + 75x - 25 = (4x - 1)(2x + 5)(3x + 5)$
3. $18x^3 + 123x^2 + 272x + 192 = (2x + 3)(3x + 8)(3x + 8)$
4. $21x^3 - 76x^2 - 640x - 768 = (7x + 12)(x - 8)(3x + 8)$
5. $6x^3 + 11x^2 - 126x + 144 = (3x - 8)(2x - 3)(x + 6)$
6. $10x^3 + 61x^2 + 116x + 65 = (5x + 13)(x + 1)(2x + 5)$
7. $15x^3 + 134x^2 + 211x + 56 = (5x + 8)(x + 7)(3x + 1)$
8. $12x^3 - 29x^2 - 97x + 84 = (4x - 3)(x - 4)(3x + 7)$
9. $16x^3 + 78x^2 + 99x + 27 = (8x + 3)(2x + 3)(x + 3)$
10. $30x^3 + x^2 - 287x - 294 = (5x + 6)(2x - 7)(3x + 7)$

11. $18x^3 + 9x^2 - 293x - 504 = (3x + 7)(2x - 9)(3x + 8)$
12. $12x^3 + 16x^2 - 81x + 35 = (3x - 5)(2x - 1)(2x + 7)$
13. $16x^3 + 100x^2 + 184x + 105 = (4x + 5)(2x + 3)(2x + 7)$
14. $30x^3 + 121x^2 + 141x + 44 = (5x + 11)(2x + 1)(3x + 4)$
15. $12x^3 + 28x^2 - 49x - 30 = (3x + 10)(2x - 3)(2x + 1)$
16. $42x^3 + 169x^2 + 204x + 65 = (7x + 13)(2x + 1)(3x + 5)$
17. $9x^3 + 9x^2 - 40x - 28 = (3x + 2)(x - 2)(3x + 7)$
18. $32x^3 - 12x^2 - 464x - 585 = (8x + 13)(2x - 9)(2x + 5)$
19. $18x^3 + 27x^2 - 32x - 13 = (6x + 13)(x - 1)(3x + 1)$
20. $21x^3 + 149x^2 + 338x + 240 = (7x + 10)(x + 3)(3x + 8)$