

Routine Expanding Practice #2

Expand and simplify:

1. $3(x + 2)$

2. $-3(k + 2)$

3. $-2(y - 5)$

4. $3(y - 4)$

5. $3(x + 5)$

6. $x(x + 1) + 2(5 + x)$

7. $5(y - 3) + 2(y - 2)$

8. $5(k + 1) + 4(5 + k)$

9. $2(x + 3) - 3(x - 2)$

10. $2(x - 1) - 6(x + 5)$

11. $(x + 1)(x + 7)$

12. $(x + 2)(x + 4)$

13. $(x - 2)(x + 3)$

14. $(x + 6)(x - 8)$

15. $(x - 1)(x - 3)$

16. $(x - 2)(x + 2)$

17. $(x - 5)^2$

18. $(x - 5)(x - 7)$

19. $(x + 3)(x - 3)$

20. $(x + 6)(k + 3)$

Answers: Routine Expanding Practice #2

Expand and simplify:

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|-----|------------------------------|------------------------|-----------------------|
| 1. | $3(x + 2)$ | $= 3x + 6$ | |
| 2. | $-3(k + 2)$ | $= -3k - 6$ | |
| 3. | $-2(y - 5)$ | $= -2y + 10$ | |
| 4. | $3(y - 4)$ | $= 3y - 12$ | |
| 5. | $3(x + 5)$ | $= 3x + 15$ | |
| 6. | $x(x + 1) + 2(5 + x)$ | $= x^2 + 1x + 10 + 2x$ | $= x^2 + 3x + 10$ |
| 7. | $5(y - 3) + 2(y - 2)$ | $= 5y - 15 + 2y - 4$ | $= 7y - 19$ |
| 8. | $5(k + 1) + 4(5 + k)$ | $= 5k + 5 + 20 + 4k$ | $= 9k + 25$ |
| 9. | $2(x + 3) - 3(x - 2)$ | $= 2x + 6 - 3x + 6$ | $= -x + 12$ |
| 10. | $2(x - 1) - 6(x + 5)$ | $= 2x - 2 - 6x - 30$ | $= -4x - 32$ |
| 11. | $(x + 1)(x + 7)$ | $= x^2 + 7x + 1x + 7$ | $= x^2 + 8x + 7$ |
| 12. | $(x + 2)(x + 4)$ | $= x^2 + 4x + 2x + 8$ | $= x^2 + 6x + 8$ |
| 13. | $(x - 2)(x + 3)$ | $= x^2 + 3x - 2x - 6$ | $= x^2 + x - 6$ |
| 14. | $(x + 6)(x - 8)$ | $= x^2 - 8x + 6x - 48$ | $= x^2 - 2x - 48$ |
| 15. | $(x - 1)(x - 3)$ | $= x^2 - 3x - 1x + 3$ | $= x^2 - 4x + 3$ |
| 16. | $(x - 2)(x + 2)$ | $= x^2 + 2x - 2x - 4$ | $= x^2 - 4$ |
| 17. | $(x - 5)^2 = (x - 5)(x - 5)$ | $= x^2 - 5x - 5x + 25$ | $= x^2 - 10x + 25$ |
| 18. | $(x - 5)(x - 7)$ | $= x^2 - 7x - 5x + 35$ | $= x^2 - 12x + 35$ |
| 19. | $(x + 3)(x - 3)$ | $= x^2 - 3x + 3x - 9$ | $= x^2 - 9$ |
| 20. | $(x + 6)(k + 3)$ | | $= xk + 3x + 6k + 18$ |

Minuses can be written as plus the negative (e.g. $3x - 5 = 3x + -5$).

Answers can be in any order, so long as the $-$ signs are correct.