

Push Tasks



1. Factorise

$$24x^2 + 2x - 15.$$

2. Factorise

$$21x^2 - 29x - 12.$$

3. Factorise

$$16x^2 - 40x + 21.$$

4. Factorise

$$18x^2 - 9x - 20.$$

5. Factorise

$$14x^2 + 17x - 6.$$

6. Factorise

$$35x^2 - 37x - 6.$$

7. Factorise

$$12x^2 + 2x - 24 \text{ fully.}$$

8. Factorise

$$-15x^2 + 7x + 2.$$

9. Factorise

$$-18x^2 + 33x - 15 \text{ fully.}$$

Push Tasks



10. Solve by factorising:
 $2x^2 + 7x + 3 = 0$.

11. Solve by factorising:
 $3x^2 - 8x + 4 = 0$.

12. Solve by factorising:
 $5x^2 + 2x - 3 = 0$.

13. Solve by factorising:
 $6x^2 - x - 2 = 0$.

14. Solve by factorising:
 $4x^2 + 4x - 15 = 0$.

15. Solve by factorising:
 $8x^2 + 2x - 3 = 0$.

16. Find k so that
 $2x^2 + kx + 3 =$
 $(2x + 1)(x + 3)$.

17. Find k so that
 $3x^2 + kx - 4 =$
 $(3x - 4)(x + 1)$.

18. Find k so that
 $4x^2 + kx - 3 =$
 $(4x - 3)(x + 1)$.

Push Tasks



19. A student writes $12x^2 - 7x - 10 = (3x - 5)(4x + 2)$. Explain the error.

20. A student writes $10x^2 - 13x + 3 = (5x - 3)(2x - 1)$. Is this correct? Explain.

21. Expand $(4x - 3)(x + 2)$. Then factorise your result.

22. Create a quadratic with factors $(3x + 2)(2x - 5)$. Expand it.

23. Create a quadratic with factors $(5x - 3)(x + 4)$. Expand it.

24. Which is easier to factorise: $6x^2 + 17x + 12$ or $24x^2 + 2x - 15$? Give one reason.

25. Factorise $30x^2 - 29x + 6$.

26. Factorise $28x^2 - 31x + 6$.

27. Factorise $45x^2 + 72x - 5$.