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|---|---|---|
| | Expanding brackets and factorising | |
| 1 | Multiply out the brackets and collect like terms $(x - 4)(3x + 1)$ | 2 |
| 2 | Multiply out the brackets and collect like terms $(5x - 7)(2x + 3)$ | 2 |
| 3 | Multiply out the brackets and collect like terms $(2x - 5)(3x - 10)$ | 2 |
| 4 | Multiply out the brackets and collect like terms $(x - 3)(5x^2 - 2x + 1)$ | 3 |
| 5 | Multiply out the brackets and collect like terms $(x - 3)(x^2 + 4x - 1)$ | 3 |
| 6 | Factorise fully $3x^2 - 48$ | 2 |
| 7 | Factorise fully $3x^2 - 2x - 5$ | 2 |
| 8 | Factorise fully $2x^2 - 18$ | 2 |
| 9 | Factorise fully $2x^2 - 7x - 15$ | 2 |
| | 20 marks | |

| Expanding brackets - Answers | | | |
|------------------------------|---|---|---|
| 1 | Mark 1 start to expand (evidence of any 3 correct terms) Mark 2 fourth term correct and collect like terms | $3x^2 + x - 12x - 4$ $3x^2 - 11x - 4$ | 2 |
| 2 | Mark 1 start to expand (evidence of any 3 correct terms) Mark 2 fourth term correct and collect like terms | $10x^2 + 15x - 14x - 21$ $10x^2 + x - 21$ | 2 |
| 3 | Mark 1 start to expand (evidence of any 3 correct terms) Mark 2 fourth term correct and collect like terms | $6x^2 - 20x$ or $-15x + 50$ $6x^2 - 35x + 50$ | 2 |
| 4 | Mark 1 start to expand (evidence of any 3 correct terms) Mark 2 complete expansion Mark 3 collect terms | $5x^3 - 2x^2 + x$ or $-15x^2 + 6x - 3$ $5x^3 - 2x^2 + x - 15x^2 + 6x - 3$ $5x^3 - 17x^2 + 7x - 3$ | 3 |
| 5 | Mark 1 start to expand (any 3 correct terms) Mark 2 complete expansion Mark 3 collect terms | $x^3 + 4x^2 - x$ or $-3x^2 - 12x + 3$ $x^3 + 4x^2 - x - 3x^2 - 12x + 3$ $x^3 + x^2 - 13x + 3$ | 3 |
| Factorising - Answers | | | |
| 6 | Mark 1 begin to factorise Mark 2 factorise fully One mark is available for $(3x + 12)(x - 4)$ or $(3x - 12)(x + 4)$ | $3(x^2 - 16)$ $3(x + 4)(x - 4)$ | 2 |
| 7 | Mark 1 One correct factor Mark 2 Complete factorisation One mark is available for $(3x + 5)(x - 1)$ | $(3x - 5)$ or $(x + 1)$ $(3x - 5)(x + 1)$ | 2 |
| 8 | Mark 1 begin to factorise Mark 2 factorise fully One mark is available for $(2x + 6)(x - 3)$ or $(2x - 6)(x + 3)$ | $2(x^2 - 9)$ $2(x + 3)(x - 3)$ | 2 |
| 9 | Mark 1 One correct factor Mark 2 Complete factorisation One mark is available for $(2x - 3)(x + 5)$ | $(2x + 3)$ or $(x - 5)$ $(2x + 3)(x - 5)$ | 2 |