

**Ex3**

Factorise the following quadratic expression into double brackets.

$$x^2 - 11x + 10$$

**Ex4**

Factorise the following quadratic expression into double brackets.

$$x^2 - 5x + 6$$

**Q3** Factorise the following quadratic expressions into double brackets.

**[a]**  $x^2 - 4x + 16$

**[b]**  $x^2 - 14x + 40$

**[c]**  $x^2 - 6x + 8$

**[d]**  $x^2 - 14x + 33$

**[e]**  $x^2 - 8x + 15$

**[f]**  $x^2 - 9x + 8$

**[g]**  $x^2 - 11x + 18$

**Q4** Factorise the following quadratic expressions into double brackets.

**[a]**  $x^2 - 5x - 4x + 14$

**[b]**  $x(x - 12) + 20$

**[c]**  $x^2 - 3(4x - 9)$

**[d]**  $x(x - 14) + 4(x + 4)$

**[e]**  $x^2 + 2(24 - 7x)$

**Q5** Factorise the following quadratic expressions into double brackets.

**[a]**  $x^2 - 5x + 6$

**[b]**  $x^2 + 14x + 48$

**[c]**  $x^2 - 8x + 12$

**[d]**  $x^2 + 19x + 88$

**[e]**  $x^2 - 21x + 110$

**[f]**  $x^2 + 2x + 1$

**[g]**  $x^2 + 14x + 24$

**[h]**  $x^2 - 11x + 18$

**[i]**  $x^2 - 13x + 40$

**[j]**  $x^2 - 17x + 42$

**[k]**  $x^2 + 4x + 16$

**[l]**  $x^2 - 16x + 15$

**[m]**  $x^2 + 20x + 75$

**[n]**  $x^2 + 23x + 120$

**[o]**  $x^2 - 20x + 96$

**[p]**  $x^2 + 17x + 52$

**Q6** Write the letter of the quadratic expression next to its factorised double bracket.

**[a]**  $x^2 - 11x + 30$

**[b]**  $x^2 + 18x + 77$

**[c]**  $x^2 + 19x + 60$

**[d]**  $x^2 - 13x + 30$

**[e]**  $x^2 - 19x + 90$

**[f]**  $x^2 + 19x + 84$

**[g]**  $x^2 + 25x + 150$

| Double brackets    | Letter |
|--------------------|--------|
| $(x + 10)(x + 15)$ |        |
| $(x + 9)(x + 10)$  |        |
| $(x + 7)(x + 12)$  |        |
| $(x + 5)(x + 6)$   |        |
| $(x + 7)(x + 11)$  |        |
| $(x + 4)(x + 15)$  |        |
| $(x + 3)(x + 10)$  |        |

**Q7** Fill in the missing boxes to make the following true.

**[a]**  $x^2 + 10x + 6x + \square = (x + 4)(x + 12)$

**[b]**  $x^2 + \square(3x + 4) = (x + 2)(x + 4)$

**[c]**  $x(x - \square) + 15 = (x - 3)(x - 5)$

**[d]**  $x^2 + \square(9 + 2x) = (x + 2)(x + 4)$

**[e]**  $x^2 - 5(\square x + 10) = (x - 5)(x - 10)$

**[f]**  $x^2 - 3(7x + 30) = (x - 6)(x - \square)$

**[g]**  $x(x + 16) + 60 = (x - \square)(x - \square)$