Express as a polynomial (e.g. \((x+3)(x+5)\), as a polynomial, is \(x^2 + 8x + 15\)):

1. \((x + 1)(x + 2)\)
2. \((x + 4)(x + 3)\)
3. \((x + 10)(x + 20)\)
4. \((x - 1)(x + 2)\)
5. \((x - 1)(x + 10)\)

Solve for \(a\):

1. \(10a + 5b + c = 0\)
2. \((a + 5)(b + 2) = 0\)
3. \((a + 5)(b + 2)(c + 3) = 0\)
4. \(a + 3b + 11(a + c) + 5 = 0\)
5. \(a^2 + 5 = 0\)

Factor (e.g. the factored form of \(x^2 + 8x + 15\) is \((x + 3)(x + 5)\)):

1. \(x^2 + 5x + 6\)
2. \(x^2 + 7x + 12\)

Now solve for \(x\):

1. \(x^2 + 5x + 6 = 0\)
2. \(x^2 + 7x + 12 = 0\)

Hint: consider the factored form, and ask what value of \(x\) would make each factor equal to 0.