

## Brackets

### N5 Maths Exam Questions

Source: 2019 P1 Q3 N5 Maths

(1) Expand and simplify  $(x + 5)(2x^2 - 7x - 3)$ .

Answer:  $2x^3 + 3x^2 - 38x - 15$

Source: 2018 P1 Q2 N5 Maths

(2) Expand and simplify  $(3x + 1)(x - 1) + 2(x^2 - 5)$ .

Answer:  $5x^2 - 2x - 11$

Source: 2017 P1 Q4 N5 Maths

(3) Expand and simplify  $(2x + 3)(x^2 - 4x + 1)$ .

Answer:  $2x^3 - 5x^2 - 10x + 3$

Source: 2015 P1 Q4 N5 Maths

(4) Multiply out the brackets and collect like terms

$$(x-4)(x^2+x-2).$$

Answer:  $x^3 - 3x^2 - 6x + 8$

Source: Specimen P1 Q2 N5 Maths

(5) Multiply out the brackets and collect like terms

$$(2x+3)(x^2-4x+1).$$

Answer:  $2x^3 - 5x^2 - 10x + 3$

Source: Specimen P1 Q7 N5 Maths

(6) (a) Multiply out the brackets and simplify:

$$x^{\frac{1}{2}} \left( x^{-\frac{3}{2}} + x^{-\frac{1}{2}} \right).$$

(b) Find the exact value of this expression when  $x = 6$ .

Answers: (a)  $x^{-1} + x^0$  (b)  $1\frac{1}{6}$  or  $\frac{7}{6}$