

# Index Notation 5



**Section A:** Simplify the following without a calculator.

1)  $5^3 \times 5^3 =$

2)  $8^9 \times 8^5 =$

3)  $2^{11} \times 2^{-2} =$

4)  $3^{-1} \times 3^{-8} =$

5)  $5^3 \div 5^3 =$

6)  $8^9 \div 8^5 =$

7)  $2^{11} \div 2^{-2} =$

8)  $3^{-1} \div 3^{-8} =$

**Section B:** Simplify the following without a calculator.

1)  $\frac{7^{20} \times 7^4}{7^{15}} =$

2)  $\frac{4^{13} \times 4^{-10}}{4^2} =$

4)  $\frac{12^{-16} \times 12^{11}}{12^{-5}} =$

5)  $\frac{4^{-1} \times 3^{12}}{3^{-5} \times 4} =$

**Section C:** Simplify the following.

1)  $a^4 \times a^8 =$

3)  $a^4 \div a^8 =$

2)  $b^{-9} \times b^{-5} =$

4)  $b^{-9} \div b^{-5} =$

## Extension

Write a question that could give an answer of  $\frac{a^3 b^{-3}}{c^3}$

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