



Course	Edexcel
Time Allowed	1hr 30 min
Score	/
Percentage	/100

STANDARD FORM AND INDICES EDEXCEL FOUNDATION

1. JUNE 2024 1F QUESTION 24

The table gives the amount of rice produced by each of two countries in 2020

Country	Amount of rice (tonnes)
Indonesia	3.5×10^7
Argentina	8.2×10^5

(a) Write 3.5×10^7 as an ordinary number.

.....
(1)

In 2020, Japan produced 6 780 000 more tonnes of rice than Argentina.

(b) Work out the amount of rice Japan produced in 2020
Give your answer in standard form.

..... tonnes
(2)

2. JUNE 2024 1F QUESTION 25

(a) Simplify $(2p)^0$ where $p > 0$

.....
(1)

$$y^9 \times y^{-3} = y^n$$

(b) Find the value of n

$n =$
(1)

(c) Simplify fully $(5a^4c^2)^3$

.....
(2)

3. JUNE 2024 IFR QUESTION 22

(a) Simplify $g^9 \div g^2$

.....
(1)

(b) Expand $5k^2(k^3 + 4)$

.....
(2)

4. JUNE 2024 2FR QUESTION 22

(b) Simplify $(e + 12)^0$ where $e > 0$

.....
(1)

(c) Simplify fully $\frac{12a^4h^6}{4ah^2}$

.....
(2)

5. JUNE 2024 2FR QUESTION 23 (2 MARKS)

$$\frac{3^{-2} \times 3^5}{3^{10}} = 3^n$$

Find the value of n

$n =$

6. JUNE 2024 2FR QUESTION 25

(a) Write 6.04×10^5 as an ordinary number.

.....
(1)

(b) Write 0.00007 in standard form.

.....
(1)

(c) Work out $\frac{7.6 \times 10^{10}}{4 \times 10^5 - 2 \times 10^4}$

Give your answer in standard form.

.....
(2)

7. JUNE 2023 1F QUESTION 21

(a) Simplify $(2c^4d^7)^3$

.....
(2)

(b) Find the value of $5y^0$ where $y > 0$

.....
(1)

8. JUNE 2023 1FR QUESTION 22

(a) Simplify $m^{10} \div m^3$

.....
(1)

$$k^n \times k^4 = k^{12}$$

(b) Write down the value of n

$n =$
(1)

(c) Simplify $(3x^6y^8)^2$

.....
(2)

9. JUNE 2023 1FR QUESTION 24

(a) Write 5.6×10^{-3} as an ordinary number.

.....
(1)

(b) Work out $\frac{6 \times 10^3}{2.1 \times 10^{-4} + 9 \times 10^{-5}}$

Give your answer in standard form.

.....
(2)

10. JUNE 2023 2F QUESTION 22

(a) Write 76 000 000 in standard form.

.....
(1)

(b) Write 5.4×10^{-4} as an ordinary number.

.....
(1)

11. JUNE 2023 2FR QUESTION 22

! (a) Simplify $(4^{-2})^0$

.....
(1)

$$3^{-14} \times 3^8 = 3^m$$

(b) Find the value of m

$m =$
(1)

12. OCTOBER 2023 1F QUESTION 23

(a) Write 5.87×10^{-4} as an ordinary number.

.....
(1)

(b) Write 84 000 000 in standard form.

.....
(1)

The number of neurons in a human brain is 8.5×10^{10}
The number of neurons in a monkey brain is 1.47×10^9

The number of neurons in a human brain is $K \times$ the number of neurons in a monkey brain.

(c) Work out the value of K
Give your answer correct to one decimal place.

$K =$
(2)

13. OCTOBER 2023 2F QUESTION 20

(b) Simplify $h^{15} \div h^3$

.....
(1)

(c) Simplify fully $(2g^3k^5)^4$

.....
(2)

(d) Given that $\frac{y^5 \times y^n}{y^7} = y^{12}$
work out the value of n

$n =$
(2)

14. JANUARY 2023 1F QUESTION 24

(a) Write 6.25×10^{-4} as an ordinary number.

.....
(1)

(b) Work out $(2.4 \times 10^{12}) \div (9.6 \times 10^4)$
Give your answer in standard form.

.....
(2)

15. JANUARY 2023 1FR QUESTION 18

(a) Simplify $w^{12} \div w^3$

.....
(1)

(b) Simplify $5m^4p^2 \times 2m^3p$

.....
(2)

16. JANUARY 2023 1F QUESTION 22

(a) Write 9.32×10^{-5} as an ordinary number.

.....
(1)

(b) Work out $3 \times 10^5 - 6 \times 10^4$
Give your answer in standard form.

.....
(2)

(c) Work out $(3 \times 10^{55}) \times (6 \times 10^{65})$
Give your answer in standard form.

.....
(2)

17. JANUARY 2023 2F QUESTION 11

- (a) Work out the value of $(4 + 3 + 6)^2$

.....
(1)

$$64 = 4^n$$

- (b) Write down the value of n

$n =$
(1)

18. JANUARY 2023 2F QUESTION 24

- ! (a) Write down the value of $(m + 2)^0$ where m is a positive integer.

.....
(1)

- (b) Simplify $(3a^2b^4)^3$

.....
(2)