



National 5 Maths Indices

SQA past paper and specimen paper
questions and answers by topic

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(a) Multiply out the brackets and simplify:

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

2

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

1

Answers:

(a) $x^{-1} + 1$ or equivalent

(b) $1\frac{1}{6}$ or $\frac{7}{6}$

National 5 Maths
SQA 2014 Paper 2
Question 8

Simplify $\frac{n^5 \times 10n}{2n^2}$.

3

Answer:

$5n^4$

National 5 Maths
SQA 2015 Paper 1
Question 14

Evaluate $8^{\frac{5}{3}}$.

2

Answer:

32

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SQA 2016 Paper 2
Question 10

Simplify $(n^2)^3 \times n^{-10}$.

Give your answer with a **positive** power.

3

Answer:

$$\frac{1}{n^4}$$

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SQA 2017 Paper 2
Question 12

Express $\frac{1}{\sqrt[3]{x}}$ in the form x^n .

2

Answer:

$$x^{-\frac{1}{3}}$$

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SQA 2018 Paper 1
Question 15

Remove the brackets and simplify $\left(\frac{2}{3}p^4\right)^2$.

2

Answer:

$$\frac{4}{9}p^8$$

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SQA 2019 Paper 2
Question 16

Simplify $\frac{a^4 \times 3a}{\sqrt{a}}$.

3

Answer:

$$3a^{\frac{9}{2}}$$

National 5 Maths
SQA 2021 Paper 1
Question 15

Evaluate $16^{\frac{3}{2}}$.

2

Answer:

64

National 5 Maths
SQA 2022 Paper 1
Question 11

Simplify $(m^{-2})^4 \times m^{-5}$.

Give your answer with a **positive** power.

3

Answer:

$$\frac{1}{m^{13}}$$

National 5 Maths
SQA 2023 Paper 1
Question 12

Simplify $\frac{5c^{-2}}{c^3 \times c^4}$.

Give your answer with a **positive** power.

3

Answer:

$$\frac{5}{c^9}$$