

Indices Rules - Basics

Name:

Class:

Date:

Mark

/ 18

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1) Write in index form

[4]

a) $3 \times 3 \times 3 \times 3 \times 3$

b) $3 \times 5 \times 3$

c) $\frac{7 \times 7 \times 7 \times 7 \times 7 \times 7}{7 \times 7 \times 7}$

d) $5 \times 5 \times 2 \times 5$

2) Evaluate the following. Where appropriate, leave your answer as a fraction.

[5]

a) $5^{-5} \times 5^5$

b) $3^{-2} \times 3^{-4} \times 3^3$

c) $10^{-4} \div 10^{-1}$

d) $\frac{3^2}{3^3}$

e) $(10^2)^2$

3) Evaluate

[1]

58^0

4) Simplify, giving your answer in index form

[5]

a) $7^{-1} \times 7^2$

b) $2^{-1} \times 2^{-3} \times 2$

c) $(5^{-4})^2$

d) $7^2 \div 7^4$

e) $\frac{2^0}{2^{-6}}$

5) Simplify

[1]

68^0

6) Show the following as a power of 10

[1]

10000

7) Show the following as a power of 4

[1]

16^3

Solutions for the assessment Indices Rules - Basics

1) a) 3^5

b) 5×3^2

c) 7^3

d) 2×5^3

2) a) 1

b) $\frac{1}{27}$

c) $\frac{1}{1000}$

d) $\frac{1}{3}$

e) 10000

3) 1

4) a) 7 or 7^1

b) 2^{-3} or $\frac{1}{2^3}$

c) 5^{-8} or $\frac{1}{5^8}$

d) 7^{-2} or $\frac{1}{7^2}$

e) 2^6

5) 1

6) 10^4

7) 4^5