



# Index Laws: Multiplying and Dividing

1 Write these products in index form

a)  $3^5 \times 3^2$

b)  $2^3 \times 2^3$

c)  $5^2 \times 5^4$

d)  $2^6 \times 2^2$

e)  $5^3 \times 5^3$

f)  $7^5 \times 7^6$

2 Write these products in index form

a)  $a^2 \times a^3$

b)  $a^4 \times a^5$

c)  $a^5 \times a$

d)  $b^3 \times b^2$

e)  $b^6 \times b^3$

f)  $m^4 \times m^4$

g)  $m^6 \times m^4$

h)  $a^9 \times a^3$

i)  $a^3 \times a^5$

j)  $y^5 \times y$

3 Write the answers to these divisions in index form

a)  $2^7 \div 2^2$

b)  $3^4 \div 3$

c)  $5^5 \div 5^2$

d)  $3^8 \div 3^2$

e)  $2^6 \div 2$

f)  $7^8 \div 7^5$

2 Write the answers to these divisions in index form

a)  $y^6 \div y^4$

b)  $y^{10} \div y^3$

c)  $a^8 \div a^5$

d)  $y^6 \div y$

e)  $m^4 \div m^3$

f)  $a^{12} \div a^7$

g)  $a^{14} \div a^7$

h)  $b^7 \div b$

i)  $m^9 \div m^2$

j)  $a^{10} \div a^3$

## Answers

### Question 1

- |          |             |
|----------|-------------|
| a) $3^7$ | b) $2^6$    |
| c) $5^6$ | d) $2^8$    |
| e) $5^6$ | f) $7^{11}$ |

### Question 2

- |             |             |
|-------------|-------------|
| a) $a^5$    | b) $a^9$    |
| c) $a^6$    | d) $b^5$    |
| e) $b^9$    | f) $m^8$    |
| g) $m^{10}$ | h) $a^{12}$ |
| i) $a^8$    | j) $y^6$    |

### Question 3

- |          |          |
|----------|----------|
| a) $2^5$ | b) $3^3$ |
| c) $5^3$ | d) $3^6$ |
| e) $2^5$ | f) $7^3$ |

### 2 Write the answers to these divisions in index form

- |          |          |
|----------|----------|
| a) $y^2$ | b) $y^7$ |
| c) $a^3$ | d) $y^5$ |
| e) $m$   | f) $a^5$ |
| g) $a^7$ | h) $b^6$ |
| i) $m^7$ | j) $a^7$ |