INDICES
MULTIPLYING EXPRESSIONS

A1 Simplify $a \times a^2$	**A2** Simplify $a \times a^3$	**A3** Simplify $a^2 \times a \times a^3$	**A4** Simplify $2 \times a^2 + 4 \times a^5$
B1 Simplify $a \times ab$	**B2** Simplify $ab \times b$	**B3** Simplify $ab \times ab$	**B4** Simplify $3 \times a \times ab \times a + 2 \times b \times ab$
C1 Simplify $c \times c^2 \times d \times d^2$	**C2** Simplify $c \times c^2 \times c \times d^2 \times d^4$	**C3** Simplify $d^3 \times d + c^4 \times d \times c^3$	**C4** Simplify $3c^3 \times d^2 \times 4c^2 \times d^5$
D1 Simplify $fg \times fh \times gh$	**D2** Simplify $2fg \times 2f^4h \times 3gh^3$	**D3** Simplify $3f^3g^2 \times 5f^2g^5$	**D4** Simplify $3f^2h^4 \times fg^3h \times 3gf^4$
E1 Simplify $(3f)^2$	**E2** Simplify $2g + 2g \times 2g$	**E3** Simplify $(3f)^2 \times (2g)^3$	**E4** Simplify $(3f)^3 \times f^4 \times 2g^2$

INDICES
MULTIPLYING EXPRESSIONS

Note the '+' signs in A4, B4, C3 and E2

Ref: G221. **1S1**

A1 Simplify
$a \times a^2$

a^3

A2 Simplify
$a \times a^3$

a^4

A3 Simplify
$a^2 \times a \times a^3$

a^6

A4 Simplify
$2 \times a^2 + 4 \times a^5$

'+'

$2a^2 + 4a^5$

B1 Simplify
$a \times ab$

$a^2 b$

B2 Simplify
$ab \times b$

ab^2

B3 Simplify
$ab \times ab$

$a^2 b^2$

B4 Simplify
$3 \times a \times ab \times a + 2 \times b \times ab$

'+'

$3a^3 b + 2ab^2$

C1 Simplify
$c \times c^2 \times d \times d^2$

$c^3 d^3$

C2 Simplify
$c \times c^2 \times c \times d^2 \times d^4$

$c^4 d^6$

C3 Simplify
$d^3 \times d + c^4 \times d \times c^3$

'+'

$d^4 + c^7 d$

C4 Simplify
$3c^3 \times d^2 \times 4c^2 \times d^5$

$12c^5 d^7$

D1 Simplify
$fg \times fh \times gh$

$f^2 g^2 h^2$

D2 Simplify
$2fg \times 2f^4 h \times 3gh^3$

$12f^5 g^2 h^4$

D3 Simplify
$3f^3 g^2 \times 5f^2 g^5$

$15f^5 g^7$

D4 Simplify
$3f^2 h^4 \times fg^3 h \times 3gf^4$

$9f^7 g^4 h^5$

E1 Simplify
$(3f)^2 = 3f \times 3f$

$= 9f^2$

E2 Simplify
$2g + 2g \times 2g = 2g + 4g^2$

'+'

E3 Simplify
$(3f)^2 \times (2g)^3$

$= 3f \times 3f \times 2g \times 2g \times 2g$
$= 72f^2 g^3$

E4 Simplify
$(3f)^3 \times f^4 \times 2g^2$

$= 3f \times 3f \times 3f \times f^4 \times 2g \times 2g$
$= 108f^7 g^2$