14. [Order of Operations]

Skill 14.1 Using 'order of operations' involving + and/or –

MM5 1 1 2 2 3 3 4 4
MM6 1 1 2 2 3 3 4 4

- Add (+) and/or subtract (–) from left to right.

Q. $8 - 2 - 5 + 6 =$

A. $8 - 2 - 5 + 6 =$
$= 6 - 5 + 6$
$= 1 + 6$
$= \mathbf{7}$

Start with 8 and subtract 2.
The result is 6.
Then subtract 5 from 6.
The result is 1.
Finally add 6 to the 1.

a) $8 + 2 + 4 =$

$10 + 4 =$ 14

b) $6 + 5 - 3 =$ .....

c) $14 - 7 - 6 =$ .....

d) $7 - 5 + 9 =$ .....

e) $19 - 8 + 1 =$ .....

f) $16 - 2 + 5 =$ .....

g) $4 + 6 + 3 =$ .....

h) $13 - 7 - 4 =$ .....

i) $5 + 8 - 9 =$ .....

j) $6 + 5 + 1 - 2 =$

$11 + 1 - 2 =$ .....

$12 - 2 =$ 10

k) $8 - 4 + 3 + 2 =$ .....

l) $9 + 7 - 5 - 1 =$ .....

m) $7 + 3 + 5 - 6 =$ .....

n) $5 - 2 + 7 - 5 =$ .....

o) $9 - 3 - 2 - 1 =$ .....

p) $5 + 8 - 4 - 3 =$ .....

q) $9 - 4 + 7 + 2 =$ .....

r) $8 + 6 - 9 + 5 =$ .....

Skill 14.2 Using 'order of operations' involving × and/or ÷

- Multiply (×) and/or divide (÷) from left to right.

Q. $12 \div 3 \times 5 =$

A. $12 \div 3 \times 5 =$
$= 4 \times 5$
$= \mathbf{20}$

Start with 12 and divide by 3.
The result is 4.
Then multiply 4 by 5.

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

$10 \times 3 =$ 30

b) $5 \times 3 \div 3 =$ .....

c) $16 \div 4 \div 2 =$ .....

d) $12 \div 3 \times 4 =$ .....

e) $2 \times 1 \times 3 =$ .....

f) $14 \div 7 \times 4 =$ .....

g) $5 \times 4 \div 4 =$ .....

h) $18 \div 6 \div 3 =$ .....

i) $7 \times 2 \div 7 =$ .....

j) $4 \times 2 \times 2 =$

$8 \times 2 =$ 16

k) $2 \times 9 \div 6 =$ .....

l) $20 \div 5 \div 2 =$ .....

m) $15 \div 5 \times 6 =$ .....

n) $3 \times 4 \times 5 =$ .....

o) $24 \div 4 \times 2 =$ .....

p) $3 \times 4 \div 3 =$ .....

q) $28 \div 7 \div 2 =$ .....

r) $4 \times 6 \div 3 =$ .....

Skill 14.3 Using 'order of operations' involving single × or ÷ and + or –

- Multiply (×) and/or divide (÷) from left to right.
- Add (+) and/or subtract (–) from left to right.

Q. $6 + 12 \div 3 =$

A. $6 + 12 \div 3 =$
$= 6 + 4$
$= \mathbf{10}$

First do 12 divided by 3.
The result is 4.
Then add 6 and 4.

a) $21 \div 3 - 2 =$

$7 - 2 =$ 5

b) $4 + 3 \times 3 =$

c) $6 \times 2 + 8 =$

d) $15 \div 5 - 2 =$

e) $2 \times 5 - 4 =$

f) $6 + 3 \times 5 =$

g) $6 + 9 \div 3 =$

h) $18 \div 2 + 4 =$

i) $3 \times 4 + 7 =$

j) $13 - 3 \times 3 =$

$13 - 9 =$ 4

k) $4 \times 4 - 7 =$

l) $15 - 10 \div 5 =$

m) $21 \div 7 - 1 =$

n) $8 + 12 \div 4 =$

o) $15 - 5 \times 2 =$

p) $18 - 12 \div 2 =$

q) $16 \div 4 + 4 =$

r) $18 \div 6 - 3 =$

Skill 14.4 Using 'order of operations' involving brackets ( )

- Simplify within the brackets.
- Multiply (×) and/or divide (÷) from left to right.
- Add (+) and/or subtract (–) from left to right.

Q. $9 + 12 \div (9 - 5) =$

A. $9 + 12 \div (9 - 5) =$
$= 9 + 12 \div 4$
$= 9 + 3$
$= \mathbf{12}$

Simplify inside the brackets and subtract 5 from 9.
The result is 4.
Then divide 12 by 4.
The result is 3.
Finally add 9 and 3.

a) $7 \times (4 - 2) =$

$7 \times 2 =$ 14

b) $9 - (4 + 3) =$ .....

c) $(5 - 2) + 7 =$ .....

d) $8 + (3 \times 2) =$ .....

e) $(4 + 4) \times 3 =$ .....

f) $15 \div (5 - 2) =$ .....

g) $17 - (6 \times 2) =$ .....

h) $(18 \div 6) \div 3 =$ .....

i) $28 \div (2 \times 7) =$ .....

j) $8 + (5 + 1) \div 2 =$

$8 + 6 \div 2 =$

$8 + 3 =$ 11

k) $4 + (2 \times 3) \times 2 =$ .....

l) $15 \div 3 - (2 + 2) =$ .....

m) $(9 + 7) - 4 \times 3 =$ .....

n) $18 \div (9 - 3) + 2 =$ .....

o) $9 + 3 \times (8 - 4) =$ .....