

# 13. [Order of Operations]

Skill 13.1 Using 'order of operations' involving + and/or -

MM3.2 1 1 2 2 3 3 4 4  
MM4.1 1 1 2 2 3 3 4 4

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

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

A.  $8 - 2 - 5 + 6 =$   
 $= 6 - 5 + 6$   
 $= 1 + 6$   
 $= 7$

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)  $8 + 2 + 4 =$

$10 + 4 =$

b)  $6 + 5 - 3 =$

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c)  $14 - 7 - 6 =$

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d)  $7 - 5 + 9 =$

.....

e)  $19 - 8 + 1 =$

.....

f)  $16 - 2 + 5 =$

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g)  $4 + 6 + 3 =$

.....

h)  $13 - 7 - 4 =$

.....

i)  $5 + 8 - 9 =$

.....

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

$11 + 1 - 2 =$   
 $12 - 2 =$

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

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

.....

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

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

.....

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

.....

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

.....

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

.....

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

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- Multiply ( $\times$ ) and/or divide ( $\div$ ) from left to right.

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

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

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

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

$10 \times 3 =$

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)  $18 \div 6 \div 3 =$

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

.....

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

$8 \times 2 =$

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

.....

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

.....

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

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

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

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

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

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

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### Skill 13.3 Using 'order of operations' involving single $\times$ or $\div$ and $+$ or $-$

MM3.2 11 22 33 44  
MM4.1 11 22 33 44

- Multiply ( $\times$ ) and/or divide ( $\div$ ) from left to right.
- Add ( $+$ ) and/or subtract ( $-$ ) from left to right.

Q.  $6 + 12 \div 3 =$

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

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

a)  $21 \div 3 - 2 =$

$7 - 2 =$

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)  $13 - 3 \times 3 =$

$13 - 9 =$

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)  $18 \div 6 - 3 =$

.....

- Simplify within the brackets.
- Multiply (  $\times$  ) and/or divide (  $\div$  ) from left to right.
- Add (  $+$  ) and/or subtract (  $-$  ) from left to right.

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

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

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

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