

Gr 4 - 7 Master Multiplication | Part 3 Memo

Gr 4 – 7 Learners Must Continue. Not Suitable for Gr 3

Question 1 | $\times 10$

1. Fill in the first ten multiples of 10.

	1	2	3	4	5	6	7	8	9	10
$\times 10$	10	20	30	40	50	60	70	80	90	100

2. Study: a) 1 hundred = 10 tens b) $10 \times 10 = 100$

3. Fill in the multiples of 10 between 100 and 200. *Simply count in tens.*

	10	11	12	13	14	15	16	17	18	19	20
$\times 10$	100	110	120	130	140	150	160	170	180	190	200

4. Study: Multiplying a number by 10 makes it 10 times bigger.

$$\begin{array}{r} \text{U} \quad \text{TU} \\ \text{a) } 9 \times 10 = 90 \\ \quad \quad \quad 9 \text{ tens} \end{array}$$

$$\begin{array}{r} \text{TU} \quad \text{HTU} \\ \text{b) } 12 \times 10 = \underline{120} \\ \quad \quad \quad 12 \text{ tens} \end{array}$$

12 tens
= 10 tens + 2 tens
= 1 hundred + 2 tens

5. Complete:

a) $10 \times 10 = 100$ b) $12 \times 10 = 120$ c) $14 \times 10 = 140$ d) $19 \times 10 = 190$
 $11 \times 10 = 110$ $13 \times 10 = 130$ $18 \times 10 = 180$ $20 \times 10 = 200$

6. Complete: a) 2 hundred = 20 tens b) $10 \times 20 = 200$ c) $20 \times 10 = 200$



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7. Study: Multiplying a number by 10 makes it 10 times bigger.

$$\begin{array}{r} \text{TU} \quad \text{HTU} \\ \text{a) } 40 \times 10 = \underline{400} \\ \quad \quad \quad 40 \text{ tens} \end{array}$$

$$\begin{array}{r} \text{TU} \quad \text{HTU} \\ \text{b) } 43 \times 10 = \underline{430} \\ \quad \quad \quad 43 \text{ tens} \end{array}$$

43 tens
= 40 tens + 3 tens
= 4 hundreds + 3 tens

8. Complete:

a) $30 \times 10 = 300$ b) $50 \times 10 = 500$ c) $60 \times 10 = 600$ d) $90 \times 10 = 900$
 $32 \times 10 = 320$ $54 \times 10 = 540$ $68 \times 10 = 680$ $99 \times 10 = 990$

Question 2 | 20×10 and 20×30 etc.

1. Write in short form: a) $2 \times 100 = 200$ b) $5 \times 100 = 500$ c) $8 \times 100 = 800$

2. Complete: Remember $10 \times 10 = 100$. [See Page 7]

$$\begin{aligned} \text{a) } 20 \times 10 \\ &= 2 \times 10 \times 10 \\ &= 2 \times 100 \\ &= 200 \end{aligned}$$

$$\begin{aligned} \text{b) } 30 \times 10 \\ &= 3 \times 10 \times 10 \\ &= 3 \times 100 \\ &= 300 \end{aligned}$$

$$\text{c) } 40 \times 10 = 400$$

$$\text{d) } 70 \times 10 = 700$$

$$\text{e) } 90 \times 10 = 900$$

3. Complete:

$$\begin{aligned} \text{a) } 20 \times 20 \\ &= 2 \times 10 \times 2 \times 10 \\ &= 4 \times 100 \\ &= 400 \end{aligned}$$

$$\begin{aligned} \text{b) } 30 \times 20 \\ &= 3 \times 10 \times 2 \times 10 \\ &= 6 \times 100 \\ &= 600 \end{aligned}$$

$$\text{c) } 40 \times 20 = 800$$

$$\text{d) } 20 \times 30 = 600$$

$$\text{e) } 30 \times 30 = 900$$



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4. Complete:

a) $12 \times 100 = 1\,200$ b) $15 \times 100 = 1\,500$ c) $24 \times 100 = 2\,400$ d) $35 \times 100 = 3\,500$

5. Complete:

$$\begin{aligned} \text{a) } 30 \times 40 \\ &= 3 \times 10 \times 4 \times 10 \\ &= 12 \times 100 \\ &= 1\,200 \end{aligned}$$

$$\begin{aligned} \text{b) } 40 \times 60 \\ &= 4 \times 10 \times 6 \times 10 \\ &= 24 \times 100 \\ &= 2\,400 \end{aligned}$$

$$\text{c) } 50 \times 30 = 1\,500$$

$$\text{d) } 80 \times 40 = 3\,200$$

$$\text{e) } 70 \times 70 = 4\,900$$

6. Complete:

a) $20 \times 100 = 2\,000$ b) $40 \times 100 = 4\,000$ c) $70 \times 100 = 7\,000$ d) $90 \times 100 = 9\,000$

7. Complete:

$$\begin{aligned} \text{a) } 40 \times 50 \\ &= 4 \times 10 \times 5 \times 10 \\ &= 20 \times 100 \\ &= 2\,000 \end{aligned}$$

$$\begin{aligned} \text{b) } 50 \times 60 \\ &= 5 \times 10 \times 6 \times 10 \\ &= 30 \times 100 \\ &= 3\,000 \end{aligned}$$

$$\text{c) } 50 \times 20 = 1\,000$$

$$\text{d) } 60 \times 50 = 3\,000$$

$$\text{e) } 50 \times 80 = 4\,000$$

Question 3 | 12×30 and 15×20 etc.

1. Complete:

$$\begin{aligned} \text{a) } 12 \times 30 \\ &= 12 \times 3 \times 10 \\ &= 36 \times 10 \\ &= 360 \end{aligned}$$

$$\begin{aligned} \text{b) } 24 \times 20 \\ &= 24 \times 2 \times 10 \\ &= 48 \times 10 \\ &= 480 \end{aligned}$$

$$\text{c) } 11 \times 40 = 440$$

$$\text{d) } 13 \times 20 = 260$$

$$\text{e) } 34 \times 20 = 680$$

2. Complete:

$$\begin{aligned} \text{a) } 15 \times 20 \\ &= 15 \times 2 \times 10 \\ &= 30 \times 10 \\ &= 300 \end{aligned}$$

$$\begin{aligned} \text{b) } 25 \times 20 \\ &= 25 \times 2 \times 10 \\ &= 50 \times 10 \\ &= 500 \end{aligned}$$

$$\begin{aligned} \text{c) } 45 \times 20 \\ &= 45 \times 2 \times 10 \\ &= 90 \times 10 \\ &= 900 \end{aligned}$$

3. Complete:

$$\begin{aligned} \text{a) } 15 \times 30 \\ &= 15 \times 3 \times 10 \\ &= 45 \times 10 \\ &= 450 \end{aligned}$$

$$\begin{aligned} \text{b) } 18 \times 20 \\ &= 18 \times 2 \times 10 \\ &= 36 \times 10 \\ &= 360 \end{aligned}$$

$$\text{c) } 19 \times 20 = 380$$

$$\text{d) } 14 \times 30 = 420$$

$$\text{e) } 25 \times 30 = 750$$



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4. Complete:

$$\begin{aligned} \text{a) } 53 \times 20 \\ &= 53 \times 2 \times 10 \\ &= 106 \times 10 \\ &= 1\ 060 \end{aligned}$$

$$\begin{aligned} \text{b) } 64 \times 20 \\ &= 64 \times 2 \times 10 \\ &= 128 \times 10 \\ &= 1\ 280 \end{aligned}$$

$$\begin{aligned} \text{c) } 54 \times 20 \\ &= 54 \times 2 \times 10 \\ &= 108 \times 10 \\ &= 1\ 080 \end{aligned}$$

$$\begin{aligned} \text{d) } 71 \times 20 \\ &= 71 \times 2 \times 10 \\ &= 142 \times 10 \\ &= 1\ 420 \end{aligned}$$

5. Complete:

$$\begin{aligned} \text{a) } 25 \times 50 \\ &= 25 \times 5 \times 10 \\ &= 125 \times 10 \\ &= 1\ 250 \end{aligned}$$

$$\begin{aligned} \text{b) } 25 \times 40 \\ &= 25 \times 4 \times 10 \\ &= 100 \times 10 \\ &= 1\ 000 \end{aligned}$$

$$\text{c) } 65 \times 20 = 1\ 300$$

$$\text{d) } 35 \times 30 = 1\ 050$$

$$\text{e) } 32 \times 50 = 1\ 600$$

Question 4 | 2-digit numbers \times 2-digit numbers ["Breaking-up"]

1. Complete using the "breaking-up" method.

a) $23 = 20 + 3$	b) 24	c) 35	d) 32
$\times 32 = 30 + 2$	$\times 22$	$\times 42$	$\times 53$
<hr/>	<hr/>	<hr/>	<hr/>
6 [2 \times 3]	8 [2 \times 4]	10 [2 \times 5]	6 [3 \times 2]
<hr/>	<hr/>	<hr/>	<hr/>
40 [2 \times 20]	40 [2 \times 20]	60 [2 \times 30]	90 [3 \times 30]
<hr/>	<hr/>	<hr/>	<hr/>
¹ 90 [30 \times 3]	¹ 80 [20 \times 4]	200 [40 \times 5]	100 [50 \times 2]
<hr/>	<hr/>	<hr/>	<hr/>
+ 600 [30 \times 20]	+ 400 [20 \times 20]	+ 1200 [40 \times 30]	+ 1500 [50 \times 30]
<hr/>	<hr/>	<hr/>	<hr/>
736	528	1470	1696
<hr/>	<hr/>	<hr/>	<hr/>
e) $43 = 40 + 3$	f) 34	g) 34	h) 75
$\times 56 = 50 + 6$	$\times 72$	$\times 83$	$\times 86$
<hr/>	<hr/>	<hr/>	<hr/>
¹ 18 [6 \times 3]	8 [2 \times 4]	¹ 12 [3 \times 4]	30 [6 \times 5]
<hr/>	<hr/>	<hr/>	<hr/>
240 [6 \times 40]	¹ 60 [2 \times 30]	90 [3 \times 30]	420 [6 \times 70]
<hr/>	<hr/>	<hr/>	<hr/>
150 [50 \times 3]	280 [70 \times 4]	320 [80 \times 4]	¹ 400 [80 \times 5]
<hr/>	<hr/>	<hr/>	<hr/>
+ 2000 [50 \times 40]	+ 2100 [70 \times 30]	+ 2400 [80 \times 30]	+ 5600 [80 \times 70]
<hr/>	<hr/>	<hr/>	<hr/>
2408	2448	2822	6450
<hr/>	<hr/>	<hr/>	<hr/>


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i) $67 = 60 + 7$	j) 64	k) 69	l) 89
$\times 48 = 40 + 8$	$\times 48$	$\times 86$	$\times 97$
<hr/>	<hr/>	<hr/>	<hr/>
² 56 [8 \times 7]	¹ 32 [8 \times 4]	¹ 54 [6 \times 9]	¹ 63 [7 \times 9]
<hr/>	<hr/>	<hr/>	<hr/>
480 [8 \times 60]	480 [8 \times 60]	360 [6 \times 60]	560 [7 \times 80]
<hr/>	<hr/>	<hr/>	<hr/>
¹ 280 [40 \times 7]	¹ 160 [40 \times 4]	¹ 720 [80 \times 9]	¹ 810 [90 \times 9]
<hr/>	<hr/>	<hr/>	<hr/>
+ 2400 [40 \times 60]	+ 2400 [40 \times 60]	+ 4800 [80 \times 60]	+ 7200 [90 \times 80]
<hr/>	<hr/>	<hr/>	<hr/>
3216	3072	5934	8633
<hr/>	<hr/>	<hr/>	<hr/>

Question 5 | 2-digit numbers × 2-digit numbers [Short Method]

1. Study: 23×32

Part 1: 23×2

$$\begin{array}{r} 23 \\ \times 32 \\ \hline 46 \\ \hline \end{array}$$

Step 2:
 $2 \times 2T = 4T$

Step 1:
 $2 \times 3U = 6U$

Part 2: $23 \times 30 = 23 \times 3 \times 10$

$$\begin{array}{r} 23 \\ \times 32 \\ \hline 46 \\ + 690 \\ \hline 736 \end{array}$$

Step 2:
We have already multiplied by 10.
 $3 \times 23 = 69$

Step 1:
 $\times 10$

2. Complete using the “short” method.

a) 23

× 22

$$\begin{array}{r} 146 \quad [2 \times 23] \\ + 460 \quad [20 \times 23] \\ \hline 506 \end{array}$$

b) 32

× 22

$$\begin{array}{r} 164 \quad [2 \times 32] \\ + 640 \quad [20 \times 32] \\ \hline 704 \end{array}$$

c) 24

× 22

$$\begin{array}{r} 148 \quad [2 \times 24] \\ + 480 \quad [20 \times 24] \\ \hline 528 \end{array}$$

d) 32

× 33

$$\begin{array}{r} 196 \quad [3 \times 32] \\ + 960 \quad [30 \times 32] \\ \hline 1056 \end{array}$$

3. Study: 43×56

Part 1: 43×6

$$\begin{array}{r} 143 \\ \times 56 \\ \hline 258 \\ \hline \end{array}$$

Step 2:
 $6 \times 4T = 24T$
and
 $24T + 1T = 25T$

Step 1:
 $6 \times 3U = 18U = 1T + 8U$

Part 2: $43 \times 50 = 43 \times 5 \times 10$

$$\begin{array}{r} 143 \\ \times 56 \\ \hline 1258 \\ + 2150 \\ \hline 2408 \end{array}$$

Step 2:
We have already multiplied by 10.
 $5 \times 43 = 215$

Step 1:
 $\times 10$

4. Complete using the “short” method.

a) 52

× 36

$$\begin{array}{r} 312 \quad [6 \times 52] \\ + 1560 \quad [30 \times 52] \\ \hline 1872 \end{array}$$

b) 48

× 35

$$\begin{array}{r} 240 \\ + 1440 \\ \hline 1680 \end{array}$$

c) 56

× 37

$$\begin{array}{r} 1392 \\ + 1680 \\ \hline 2072 \end{array}$$

d) 43

× 68

$$\begin{array}{r} 1344 \\ + 2580 \\ \hline 2924 \end{array}$$

e) 54

× 87

$$\begin{array}{r} 378 \\ + 4320 \\ \hline 4698 \end{array}$$

Question 6 | Mixed Questions and Word Sums

1. Complete:

Do your working out on a separate piece of paper, where necessary.

a) $13 \times 10 = 130$

b) $25 \times 20 = 500$

c) $12 \times 12 = 144$

d) $15 \times 30 = 450$

e) $13 \times 15 = 195$

f) $50 \times 40 = 2000$

g) $68 \times 30 = 2040$

h) $34 \times 23 = 782$

i) $60 \times 89 = 5340$

j) $56 \times 47 = 2632$

k) $87 \times 76 = 6612$

l) $96 \times 87 = 8352$

2. There are 18 books in one box.

How many books will there be in 20 of these boxes? $18 \times 20 = 360$ books.

3. Jone asks the ground staff to pack 23 rows of 15 chairs each in the school hall.

How many chairs will be packed out in total? $23 \times 15 = 345$



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4. A bag of chicken feed costs R48. A farmer buys 75 bags.

How much does he spend on chicken feed? $R48 \times 75 = R3600$

5. Adam uses 25 litres of petrol every month. $1 \text{ year} = 12 \text{ months}$

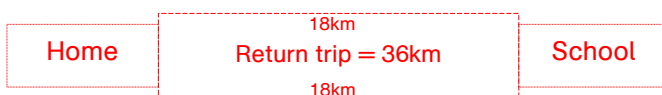
How much petrol does he use in 1 year? $25 \text{ litres} \times 12 = 300 \text{ litres}$

6. The distance from Junior's home to school is 18km.

He cycles to school and back home every (school) day for 4 weeks.

School week = 5 days

4 School weeks = $4 \times 5 \text{ days} = 20 \text{ days}$



Daily return trip = 36km

Total distance = $36 \times 20 = 720 \text{ km}$

Question 7 | $\times 100$ and $\times 120$ etc.

[Mental Maths]



1. Study: We are counting in 100s:

100 , 200 , 300 , 400 , 500 , 600...

These numbers are **multiples** of 100.

The third multiple of 100 is 300:

- $100 + 100 + 100 = 300$
- 3 hundreds = 300
- $3 \times 100 = 300$

2. Fill in the multiples of 100 in the table. *Simply count in 100s.*

	1	2	3	4	5	6	7	8	9	10	11	12
$\times 100$	100	200	300	400	500	600	700	800	900	1 000	1 100	1 200

3. Complete the table.

	Repeated addition	In words	Multiplication form	Answer
a)	$100 + 100 + 100$	3 hundreds	3×100	300
b)	$100 + 100$	2 hundreds	2×100	200
c)	$100 + 100 + 100 + 100$	4 hundreds	4×100	400

4. To multiply by 100 means to make a number 100 times bigger. [$100 = 10 \times 10$]It does not mean that we "add two zeros". $4 + 0 + 0 = 4$ but $4 \times 100 = 400$

5. Complete:

a) $1 \times 100 = 100$ b) $5 \times 100 = 500$ c) $100 \times 4 = 400$ d) $2 \times 10 \times 10 = 200$
 $3 \times 100 = 300$ $7 \times 100 = 700$ $100 \times 8 = 800$ $10 \times 10 \times 9 = 900$

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6. Complete:

a) $9 \times 100 = 900$ b) $12 \times 100 = 1\,200$ c) $14 \times 10 \times 10 = 1\,400$
 $10 \times 100 = 1\,000$ $15 \times 100 = 1\,500$ $10 \times 10 \times 19 = 1\,900$

7. Complete:

a) 3×120
 $= 3 \times 12 \times 10$
 $= 36 \times 10$
 $= 360$

b) 2×140
 $= 2 \times 14 \times 10$
 $= 28 \times 10$
 $= 280$

c) 3×150
 $= 3 \times 15 \times 10$
 $= 45 \times 10$
 $= 450$

c) $2 \times 160 = 320$

d) $150 \times 2 = 300$

e) $4 \times 120 = 480$

Question 8 | $\times 200$ to $\times 290$

1. Fill in the first ten multiples of 200. *Simply count in 200s.*

	1	2	3	4	5	6	7	8	9	10
$\times 200$	200	400	600	800	1 000	1 200	1 400	1 600	1 800	2 000

2. Complete the table.

	Repeated addition	Multiplication form	Answer
a)	$200 + 200$	2×200	400
b)	$200 + 200 + 200$	3×200	600
c)	$200 + 200 + 200 + 200$	4×200	800



3. Complete:

a) $3 \times 200 = 600$ b) $2 \times 200 = 400$ c) $200 \times 4 = 800$ d) $200 \times 1 = 200$
 $200 \times 3 = 600$ $200 \times 2 = 400$ $20 \times 40 = 800$ $200 \times 10 = 2000$

4. Complete:

a) 6×200
 $= 6 \times 2 \times 100$
 $= 12 \times 100$
 $= 1200$

b) 8×200
 $= 8 \times 2 \times 100$
 $= 16 \times 100$
 $= 1600$

c) $5 \times 200 = 1000$
d) $200 \times 7 = 1400$
e) $9 \times 200 = 1800$



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5. Complete:

a) 3×210
 $= 3 \times 21 \times 10$
 $= 63 \times 10$
 $= 630$

b) 2×240
 $= 2 \times 24 \times 10$
 $= 48 \times 10$
 $= 480$

c) 3×230
 $= 3 \times 23 \times 10$
 $= 69 \times 10$
 $= 690$

d) $2 \times 230 = 460$
e) $210 \times 4 = 840$
f) $3 \times 220 = 660$

6. Complete:

a) 2×260
 $= 2 \times 26 \times 10$
 $= 52 \times 10$
 $= 520$

b) 2×250
 $= 2 \times 25 \times 10$
 $= 50 \times 10$
 $= 500$

c) 4×230
 $= 4 \times 23 \times 10$
 $= 92 \times 10$
 $= 920$

d) $3 \times 240 = 720$
e) $280 \times 2 = 560$
f) $4 \times 240 = 960$

Question 9 | $\times 300$ to $\times 900$

1. Fill in the first ten multiples of 300. *Simply count in 300s.*

	1	2	3	4	5	6	7	8	9	10
$\times 300$	300	600	900	1 200	1 500	1 800	2 100	2 400	2 700	3 000

2. Complete the table.

	Repeated addition	Multiplication form	Answer
a)	$300 + 300$	2×300	600
b)	$300 + 300 + 300$	3×300	900
c)	$300 + 300 + 300 + 300$	4×300	1 200



3. Complete:

$$\begin{aligned} \text{a) } & 4 \times 300 \\ & = 4 \times 3 \times 100 \\ & = 12 \times 100 \\ & = 1\,200 \end{aligned}$$

$$\begin{aligned} \text{b) } & 7 \times 300 \\ & = 7 \times 3 \times 100 \\ & = 21 \times 100 \\ & = 2\,100 \end{aligned}$$

$$\begin{aligned} \text{c) } & 2 \times 300 = 600 \\ \text{d) } & 300 \times 5 = 1\,500 \\ \text{e) } & 9 \times 300 = 2\,700 \end{aligned}$$



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4. Complete:

$$\begin{aligned} \text{a) } & 6 \times 400 \\ & = 6 \times 4 \times 100 \\ & = 24 \times 100 \\ & = 2\,400 \end{aligned}$$

$$\begin{aligned} \text{b) } & 8 \times 400 \\ & = 8 \times 4 \times 100 \\ & = 32 \times 100 \\ & = 3\,200 \end{aligned}$$

$$\begin{aligned} \text{c) } & 2 \times 400 = 800 \\ \text{d) } & 300 \times 4 = 1\,200 \\ \text{e) } & 9 \times 400 = 3\,600 \end{aligned}$$

5. Complete:

$$\begin{aligned} \text{a) } & 4 \times 500 \\ & = 4 \times 5 \times 100 \\ & = 20 \times 100 \\ & = 2\,000 \end{aligned}$$

$$\begin{aligned} \text{b) } & 5 \times 600 \\ & = 5 \times 6 \times 100 \\ & = 30 \times 100 \\ & = 3\,000 \end{aligned}$$

$$\begin{aligned} \text{c) } & 2 \times 500 = 1\,000 \\ \text{d) } & 400 \times 5 = 2\,000 \\ \text{e) } & 8 \times 500 = 4\,000 \end{aligned}$$

6. Complete:

$$\begin{aligned} \text{a) } & 3 \times 600 = 1\,800 & \text{b) } & 8 \times 600 = 4\,800 & \text{c) } & 200 \times 4 = 800 & \text{d) } & 800 \times 7 = 5\,600 \\ & 6 \times 700 = 4\,200 & & 9 \times 700 = 6\,300 & & 40 \times 20 = 800 & & 80 \times 70 = 5\,600 \end{aligned}$$