Gr 6 – 7 Master Multiplication | Part 5

Only Gr 6 – 7 Learners Must Continue.

Question 1 | 300 × 200 and 600 × 400 etc.

1. Study: Multiplication by 100 makes a number 100 times bigger.

a) $\overset{T\ U}{10} \times 100 = \overset{Th\ H\ T\ U}{1\ 000}$ Check: "3 zeros" "3 zeros"

b) $\overset{H\ T\ U}{100} \times 100 = \overset{TTh\ Th\ H\ T\ U}{10\ 000}$ Check: "4 zeros" "4 zeros"

2. Complete:

a) $200 \times 100 = 20\ 000$ b) $500 \times 100 =$ ..... c) $800 \times 100 =$ .....

3. Complete: NB: $100 \times 100 = 10\ 000$.

a) 300×200
$= 3 \times 2 \times 100 \times 100$
$= 6 \times 10\ 000$
$= 60\ 000$
Check: "4 zeros"

b) 200×400
$=$ .....
$=$ .....
$=$ .....

c) $200 \times 300 =$ .....

d) $400 \times 200 =$ .....

e) $300 \times 300 =$ .....

4. Complete:

a) 500×300
$= 5 \times 3 \times 100 \times 100$
$= 15 \times 10\ 000$
$= 150\ 000$
Check: "4 zeros"

b) 400×600
$=$ .....
$=$ .....
$=$ .....

c) $400 \times 300 =$ .....

d) $700 \times 400 =$ .....

e) $900 \times 500 =$ .....

5. Complete:

a) 500×400
$= 5 \times 4 \times 100 \times 100$
$= 20 \times 10\ 000$
$= 200\ 000$
Check: "5 zeros"

b) 600×500
$=$ .....
$=$ .....
$=$ .....

c) $200 \times 500 =$ .....

d) $500 \times 800 =$ .....

e) $400 \times 500 =$ .....

6. Complete:

a) 340×200
$= 34 \times 2 \times 10 \times 100$
$= 68 \times 1\ 000$
$= 68\ 000$

b) 230×300
$=$ .....
$=$ .....
$=$ .....

c) $110 \times 300 =$ .....

d) $240 \times 200 =$ .....

e) $430 \times 200 =$ .....

Question 2 | 3-digit × 3-digit Numbers: Part 1 ["Short" Method]

1. Study:

422 × 643

Part 1:

422
× 643
1266 ← 3 × 422

Part 2:

422
× 643
1266 ← 3 × 422
16880 ← 40 × 422

Part 3:

1 1
422
× 643
1266 ← 3 × 422
16880 ← 40 × 422
+ 253200 ← 600 × 422
271346

2. Complete using the "short" method.

a) 342
× 232
684 [2 × 342]
10260 [30 × 342]
+ 68400 [200 × 342]
79344

b) 432
× 223

c) 623
× 232

d) 832
× 323

3. Complete: Do your working out on a separate piece of paper.

a) 423 × 211 = ...

b) 223 × 142 = ...

c) 301 × 847 = ...

4. How many sweets are there in 456 jars with 789 sweets in each jar?

.....

5. Cool drink bottles are packed in containers each holding 11 dozen bottles.
Calculate the number of cool drink bottles that can be packed in 522 of these containers.

.....

Question 3 | 3-digit × 3-digit Numbers: Part 2 ["Short" Method]

1. Study:

526 × 748

Part 1:		Part 2:		Part 3:	
526		526		526	
× 748		× 748		× 748	
4208	← 8 × 526	4208	← 8 × 526	4208	← 8 × 526
		21040	← 40 × 526	21040	← 40 × 526
				+ 368200	← 700 × 526
				393448	

2. Complete using the "short" method.

a) 346		b) 423	c) 629	d) 837
× 732		× 628	× 543	× 683
692	[2 × 346]			
10380	[30 × 346]			
+ 242200	[700 × 346]			
253272				

3. Complete: Do your working out on a separate piece of paper.

a) 423 × 269 = ...

b) 627 × 148 = ...

c) 467 × 849 = ...

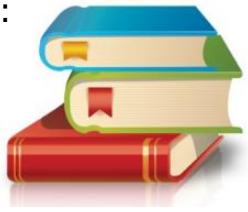
4. A school buys 758 Play! Maths Books at a discounted price of R105 each.

How much do all the books cost in total? .....

5. In a book of 289 pages there are approximately 18 words to a line and 27 lines to a page. Approximately, how many words:

a) are there on a page? .....

b) are there in the book? .....



Question 4 | 4-digit × 1-digit Numbers

1. Complete:

a) $3 \times 2\,000$
$= 3 \times 2 \times 1\,000$
$= 6 \times 1\,000$
$= 6\,000$

b) $2 \times 4\,000$
$= \ldots\ldots$
$= \ldots\ldots$
$= \ldots\ldots$

c) $4 \times 2\,000 = \ldots\ldots$

d) $2\,000 \times 3 = \ldots\ldots$

e) $3\,000 \times 3 = \ldots\ldots$

2. Complete:

a) $3 \times 6\,000$
$= 3 \times 6 \times 1\,000$
$= 18 \times 1\,000$
$= 18\,000$
Check: "3 zeros"

b) $4 \times 7\,000$
$= \ldots\ldots$
$= \ldots\ldots$
$= \ldots\ldots$

c) $5 \times 5\,000 = \ldots\ldots$

d) $6\,000 \times 7 = \ldots\ldots$

e) $9\,000 \times 8 = \ldots\ldots$

3. Complete:

a) $4 \times 5\,000$
$= 4 \times 5 \times 1\,000$
$= 20 \times 1\,000$
$= 20\,000$
Check: "4 zeros"

b) $5 \times 6\,000$
$= \ldots\ldots$
$= \ldots\ldots$
$= \ldots\ldots$

c) $2 \times 5\,000 = \ldots\ldots$

d) $5 \times 8\,000 = \ldots\ldots$

e) $4 \times 5\,000 = \ldots\ldots$

4. Complete:

a) Th H T U	b) Th H T U	c) TTh Th H T U	d) TTh Th H T U	e) TTh Th H T U
1243	2334	6232	7122	9234
× 2	× 2	× 3	× 3	× 2
2486		18696		

(2Th + 4H + 8T + 6U)

5. Complete:

a)	b)	c)	d)	e)
$1^{1}2^{1}43$	2334	6232	7122	9234
× 4	× 3	× 5	× 6	× 4
4972				

6. Complete:

a)	b)	c)	d)	e)
$^{1}3^{5}2^{4}76$	8467	2538	6327	9637
× 7	× 5	× 6	× 8	× 9
22932				

Question 5 | 3000 × 20 and 3000 × 200 etc.

1. Study:

a) 1 000 × 10 = 10 000 (Th H T U → TTh Th H T U)	b) 1 000 × 100 = 100 000 (Th H T U → HTh TTh Th H T U)
Check: "4 zeros" "4 zeros"	Check: "5 zeros" "5 zeros"

2. Complete:

a) 2 000 × 10 = 20 000 b) 5 000 × 10 = ... c) 8 000 × 10 = ...

2 000 × 100 = 200 000 5 000 × 100 = ... 8 000 × 100 = ...

3. Study:

a) 3 000 × 20
= 3 × 2 × **1000 × 10**
= 6 × **10 000**
= 60 000 Check: "4 zeros"

b) 3 000 × 200
= 3 × 2 × **1000 × 100**
= 6 × **100 000**
= 600 000 Check: "5 zeros"

4. Complete:

a) 4 000 × 20 = 80 000 b) 3 000 × 30 = ... c) 2 000 × 30 = ...

4 000 × 200 = 800 000 3 000 × 300 = ... 2 000 × 300 = ...

5. Study:

a) 4 000 × 30
= 4 × 3 × **1000 × 10**
= 12 × **10 000**
= 120 000 Check: "4 zeros"

b) 4 000 × 300
= 4 × 3 × **1000 × 100**
= 12 × **100 000**
= 1 200 000 Check: "5 zeros"

6. Complete:

a) 3 000 × 50 = 150 000 b) 8 000 × 40 = ... c) 5 000 × 90 = ...

3 000 × 500 = 1 500 000 8 000 × 400 = ... 5 000 × 900 = ...

7. Study:

a) 4 000 × 50
= 4 × 5 × **1000 × 10**
= 20 × **10 000**
= 200 000 Check: "5 zeros"

b) 4 000 × 500
= 4 × 5 × **1000 × 100**
= 20 × **100 000**
= 2 000 000 Check: "6 zeros"

a) 5 000 × 20 = 100 000 b) 8 000 × 50 = ... c) 5 000 × 60 = ...

5 000 × 200 = 2 000 000 8 000 × 500 = ... 5 000 × 600 = ...

Question 6 | 4-digit × 2-digit Numbers ["Short" Method]

1. Study: **4526 × 43**

Part 1:

```
  1 1
  4526
× 43
-------
 13578   ← 3 × 4526
-------
-------
```

Part 2:

```
  2 1 2
  4526
× 43
-------
 13578   ← 3 × 4526
+181040  ← 40 × 4526
-------
 194618
-------
```

2. Complete:

a) 2346 × 32

4692 [2 × 2346]

+ 70380 [30 × 2346]

75072

b) 2432 × 43

c) 3625 × 64

d) 6374 × 78

3. Complete: Do your working out on a separate piece of paper.

a) 1423 × 21 = ...

b) 4527 × 43 = ...

c) 7084 × 96 = ...

4. A factory fills 235 boxes with 18 batteries each, every month.
How many batteries does the factory pack altogether:

a) per month? .....

b) per year? .....

c) in 2 years? .....

Question 7 | 4-digit × 3-digit Numbers ["Short" Method]

1. Study:

3425 × 647

Part 1:

$$\begin{array}{r} {\scriptstyle 2\,1\,3} \\ 3425 \\ \times\ 647 \\ \hline 23975 \\ \\ \\ \hline \\ \hline \end{array}$$

← 7 × 3425

Part 2:

$$\begin{array}{r} {\scriptstyle 1\,1\,2} \\ 3425 \\ \times\ 647 \\ \hline 23975 \\ 137000 \\ \\ \hline \\ \hline \end{array}$$

← 7 × 3425

← 40 × 3425

Part 3:

$$\begin{array}{r} {\scriptstyle 2\,1\,3} \\ 3425 \\ \times\ 647 \\ \hline 23975 \\ 137000 \\ +\ 2055000 \\ \hline 2\,215\,975 \end{array}$$

← 7 × 3425

← 40 × 3425

← 600 × 3425

2. Complete:

a) $\begin{array}{r} 2643 \\ \times\ 532 \\ \hline 5286 \\ 79290 \\ +\ 1321500 \\ \hline 1\,406\,076 \end{array}$ [2 × 2643] [30 × 2643] [500 × 2643]

b) $\begin{array}{r} 4228 \\ \times\ 436 \\ \hline \\ \\ \\ \hline \\ \hline \end{array}$

c) $\begin{array}{r} 6247 \\ \times\ 286 \\ \hline \\ \\ \\ \hline \\ \hline \end{array}$

d) $\begin{array}{r} 8356 \\ \times\ 783 \\ \hline \\ \\ \\ \hline \\ \hline \end{array}$

3. A normal, healthy adult heart beats about 78 beats per minute.
How many times will a heart beat:

a) in one hour? .....

b) in one day? .....

4. Susan works at a law firm. She earns R469 an hour.
She works for 8 hours each day, from Monday to Friday each week.
How much does she per earn:

a) per day? .....

b) per week? .....

c) in 45 work days? .....