Gr 3 - 7 Master Multiplication | Part 2
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1. Study: 12 × 3 means "12 threes". It is equal to "3 twelves" or 3 × 12.

Study the vertical-column method:

Multiply the unit digits first.

$$
\begin{array}{rl}
12 & (10 + 2) \\
\times\ 3 & (\quad\ \ 3) \\
\hline
6 & (3 \times 2) \\
+\ 30 & (3 \times 10) \\
\hline
36 &
\end{array}
$$

Picture it:
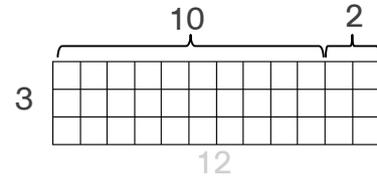
Step 1: 12 = 10 + 2.

Step 2: Multiply both 2 and 10 **by** 3.

Step 3: Add to get the final answer.

2. Write in expanded form: a) 13 = 10 + 3   b) 16 = …… + ……   c) 19 = …… + ……

3. Complete using the vertical column method. Multiply the unit digits first.

a) 16 (10 + 6)

$$
\begin{array}{rl}
\times\ 2 & (\quad\ \ 2) \\
\hline
12 & (2 \times 6) \\
+\ 20 & (2 \times 10) \\
\hline
32 &
\end{array}
$$

b) 14
   × 2

c) 13
   × 3

d) 13
   × 4

e) 15
   × 3

g) 17 (10 + 7)

$$
\begin{array}{rl}
\times\ 4 & (\quad\ \ 4) \\
\hline
28 & (4 \times 7) \\
+\ 40 & (4 \times 10) \\
\hline
68 &
\end{array}
$$

h) 18
   × 3

i) 13
   × 7

j) 17
   × 6

$$
\begin{array}{r}
42 \\
+\ 60 \\
\hline
102
\end{array}
$$

k) 15
   × 7

l) 14
   × 9

Question 2 │ ×20 to ×29: Part 1

1. Study: We are counting in twenties:

> 20 , 40 , 60 , 80 , 100, 120, 140 …

These numbers are multiples of 20.

The third multiple of 20 is 60:
- $20 + 20 + 20 = 60$
- 3 twenties $= 60$
- $3 \times 20 = 6$

2. Fill in the first ten multiples of 20. *Simply count in twenties.*

	1	2	3	4	5	6	7	8	9	10
× 20	20	40								200

3. Complete the table.

	Repeated addition	In words	Multiplication form	Answer
a)	20 + 20	2 twenties	2 × 20	40
b)	20 + 20 + 20			
c)	20 + 20 + 20 + 20			

4. Study: To multiply 4 by 20 think of 20 as 2 × 10:

$$4 \times 20 = 4 \times 2 \times 10$$
$$= 8 \times 10$$
$$= 80$$

5. Complete:

a) $3 \times 2 = 6$
$3 \times 20 = 60$
$20 \times 3 = 60$

b) $2 \times 2 = ……$
$2 \times 20 = ………$
$20 \times 2 = ………$

c) $4 \times 2 = ……$
$4 \times 20 = ………$
$20 \times 4 = ………$

d) $20 \times 1 = ……$
$20 \times 2 = ………$
$20 \times 3 = ………$

6. Write in expanded form: a) $23 = 20 + 3$ b) $28 = …… + ……$ c) $22 = …… + ……$

7. Complete: Multiply the unit digits first.

a) 24 (20 + 4)
× 3 (3)
‾‾‾‾‾
12 (3 × 4)
+ 60 (3 × 20)
‾‾‾‾‾
72

b) 23
× 2

c) 26
× 3

d) 26
× 4
‾‾‾
24
+ 80
‾‾‾
104

e) 29
× 4

Gr 3 - 7 Master **Multiplication** │ Part 2

Question 3 │ ×20 to ×29: Part 2

1. Fill in the multiples of 20 between 100 and 200. *Simply count in twenties.*

	5	6	7	8	9	10
× 20	100	120				200

2. Study: a) 20 + 20 + 20 + 20 + 20 = 100

thus **5 × 20 = 100**

$$\overbrace{\text{b) } 20 + 20 + 20 + 20 + 20 + 20}^{100} = 120$$

thus **6 × 20 = 120**

$$
\begin{aligned}
5 \times 20 &= \mathbf{5 \times 2} \times 10 \\
&= \mathbf{10} \times 10 \\
&= 100
\end{aligned}
$$

$$
\begin{aligned}
6 \times 20 &= \mathbf{6 \times 2} \times 10 \\
&= \mathbf{12} \times 10 \\
&= 120
\end{aligned}
$$

3. Complete:

a) 5 × 2 = 10   b) 6 × 2 = ……   c) 8 × 2 = ……   d) 9 × 2 = ……

   5 × 20 = 100   6 × 20 = ………   8 × 20 = ………   9 × 20 = ………

   20 × 5 = 100   20 × 6 = ………   20 × 8 = ………   20 × 9 = ………

4. Complete: Multiply the unit digits first.

a) 23 (20 + 3)
  × 6 (6)
  ‾‾‾‾‾‾‾‾‾‾‾‾
      18 (6 × 3)
  + 120 (6 × 20)
  ‾‾‾‾‾‾‾‾‾‾‾‾
     138
  ‾‾‾‾‾‾‾‾‾‾‾‾

b) 23
  × 5

c) 25
  × 6

d) 21
  × 9

e) 28
  × 7

5. Complete:

a) 27 (20 + 7)
  × 8 (8)
  ‾‾‾‾‾‾‾‾‾‾‾‾
    ¹56 (8 × 7)
  + 160 (8 × 20)
  ‾‾‾‾‾‾‾‾‾‾‾‾
     216
  ‾‾‾‾‾‾‾‾‾‾‾‾

b) 25
  × 8

c) 23
  × 9

d) 28
  × 8

e) 29
  × 9

Question 4 │ ×30 to ×90

1. Fill in the first ten multiples of 30. *Simply count in 30s.*

	1	2	3	4	5	6	7	8	9	10
× 30	30	60			150					

2. Complete the table.

	Repeated addition	In words	Multiplication form	Answer
a)	30 + 30 + 30	3 thirties	3 × 30	90
b)	30 + 30			
c)	30 + 30 + 30 + 30			

3. Study:

a) $2 \times 30 = 2 \times 3 \times 10$
$= 6 \times 10$
$= 60$

b) $8 \times 30 = 8 \times 3 \times 10$
$= 24 \times 10$
$= 240$

4. Complete:

a) 4 × 3 = 12
4 × 30 = 120

b) 6 × 3 = ………
6 × 30 = ………

c) 9 × 3 = ………
9 × 30 = ………

d) 5 × 30 = ………
30 × 5 = ………

5. Fill in the first ten multiples of 50. *Simply count in 50s.*

	1	2	3	4	5	6	7	8	9	10
× 50	50	100	150							

6. Study:

a) $4 \times 50 = 4 \times 5 \times 10$
$= 20 \times 10$
$= 200$

b) $5 \times 70 = 5 \times 7 \times 10$
$= 35 \times 10$
$= 350$

7. Complete:

a) 3 × 5 = 15
3 × 50 = 150
30 × 5 = 150
5 × 30 = 150

b) 6 × 4 = ………
6 × 40 = ………
60 × 4 = ………
4 × 60 = ………

c) 5 × 8 = ………
5 × 80 = ………
50 × 8 = ………
8 × 50 = ………

d) 6 × 7 = ………
6 × 70 = ………
60 × 7 = ………
7 × 60 = ………

Question 5 │ 2-digit numbers × 1-digit numbers   [45 × 7 etc.]

1. Write in expanded form: a) $34 = 30 + 4$ b) $58 = \ldots\ldots + \ldots\ldots$ c) $92 = \ldots\ldots + \ldots\ldots$

2. Complete: Multiply the unit digits first.

a) 34 (30 + 4)	b) 34	c) 49	d) 35	e) 39
× 3 (3)	× 2	× 2	× 3	× 3
12 (3 × 4)				
+ 90 (3 × 30)				
102				

3. Complete: Multiply the unit digits first.

a) 46 (40 + 6)	b) 62	c) 56	d) 38	e) 98
× 3 (3)	× 3	× 4	× 7	× 6
18 (3 × 6)				
+ 120 (3 × 40)				
138				

4. Complete: Multiply the unit digits first.

a) 37 (30 + 7)	b) 43	c) 69	d) 89	e) 79
× 6 (6)	× 7	× 6	× 7	× 8
^{1}42 (6 × 7)				
+ 180 (6 × 30)				
222				

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Question 6 │ Short Method: **Part 1**   [2-digit × 1-digit]

1. Complete:

a) 3 × 2 units

= 6 units

b) 2 × 2 units

= ...... units

c) 2 × 4 tens

= 8 tens

d) 3 × 3 tens

= ...... tens

2. Complete: Multiply the unit digits first.

a) T U
    43 (4T + 3U)

    × 2 (2U)
    _____
    86 (8T + 6U)

b) T U
    34

    × 2
    _____

c) T U
    24

    × 2
    _____

d) T U
    22

    × 3
    _____

e) T U
    44

    × 2
    _____

3. Write in expanded form:

a) 12 = 1T + 2U   b) 24 = ...T + ...U   c) 45 = ...T + ...U   d) 72 = ...T + ...U

4. Complete:

a) 3 × 4 units

= 12 units

= 1 ten 2 units

b) 5 × 3 units

= .... units

= ......ten ......units

c) 4 × 6 units

= .... units

= ......ten ......units

d) 8 × 4 units

= .... units

= ......ten ......units

5. Study: **Step 1:**

T U
^{1}23   4 × 3 units

× 4   = 12 units
_____
2   = 1 ten + 2 units

Step 2:

T U
^{1}23   4 × 2T = 8T

× 4   and
_____
92   8T + 1T = 9T

6. Complete:

a) T U
    ^{1}24

    × 4
    _____
    96

b) 36

    × 2
    _____

c) 26

    × 3
    _____

d) ^{2}16

    × 4
    _____
    64

e) 27

    × 3
    _____

f) 14

    × 7
    _____

Question 7a │ Short Method: Part 2   [2-digit × 1-digit]

1. Study: a) 8 tens + 2 tens = 10 tens   and   10 tens = 100 [1H]

            b) 8 tens + 4 tens = 12 tens   and   12 tens = 120 [1H + 2T]

2. Complete: "T" stands for "tens".

 a) 7T + 3T = 10T   b) 9T + 3T = …… T   c) 8T + 6T = …… T   d) 7T + 6T = …… T

3. Study: **Step 1:**   **Step 2:**

                      T U   H T U

                     ^{2}26   4 × 6 units ^{2}26   4 × 2T = 8T

                    × **4**   = 24 units   × **4**   and

                    ____   ____
                       4   = 2 tens + 4 units   102   8T + 2T = 10T [100]

4. Complete:

H T U
a) ^{3}14
× 8
112

b)   39   c)   25   d)   19   e)   37   f)   18

× 3   × 4   × 7   × 3   × 9

Step 2: 8T + 3T = 11T

Question 7b │ Short Method: Part 3   [2-digit × 1-digit]

1. Complete: "T" stands for "tens" and "H" for "hundreds".

 a)   3 × 4 tens   b) 4 × 6 tens   c) 7 × 5 tens   d) 8 × 9 tens

    = 12 tens   = ……… tens   = ……… tens   = ……… tens

    = 1H + 2T   = …… H + …… T   = …… H + …… T   = …… H + …… T

2. Complete:

H T U
a) 42
× 3
126

b)   H T U 52   c)   63   d)   72   e)   81

× 2   × 3   × 3   × 9

3. Complete: "T" stands for "tens".

   a) 15T + 3T   b) 26T + 2T   c) 30T + 8T   d) 63T + 5T

   = 18T   = ...T   = ...T   = ...T

---

4. Study: **Step 1:**   **Step 2:**

                T U   H T U

                ^{1}43   6 × 3 units ^{1}43   6 × 4T = 24T

                × 6   = 18 units   × 6   and

                   8   = 1 ten + 8 units   258   24T + 1T = 25T   [250]

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5. Complete:

   H T U
   a) ^{2}54   b)   84   c)   95   d)   58   e)   65   f)   98

   × 6   × 3   × 4   × 4   × 7   × 7

   324

Question 8 │ Short Method: **Part 4**   [2-digit × 1-digit]

1. Complete: "T" stands for "tens".

   a) 18T + 3T   b) 27T + 5T   c) 39T + 5T   d) 72T + 8T

   = 21T   = ...T   = ...T   = ...T

2. Complete:

   H T U
   a) ^{3}45   b)   34   c)   36   d)   78   e)   36   f)   98

   × 7   × 6   × 6   × 4   × 9   × 7

   315

   g) ^{5}67   h)   89   i)   76   j)   58   k)   78   l)   69

   × 8   × 6   × 7   × 9   × 8   × 9

   536

Step 2: 8 × 6T = 48T and 48T + 5T = 53T

Gr 3 - 7 Master **Multiplication** │ Part 2

Question 9 │ Word Sums

1. One litre of juice costs R8.

   a) The cost of 2 litres of the juice $= 2 \times R8 = R16$.

   b) The cost of 5 litres of the juice $=$ ………………………………

   c) The cost of 12 litres of the juice $=$ ………………………………

2. One bag of tomatoes cost R26.

   a) The cost of 2 bags of tomatoes $=$ ………………………………

   b) The cost of 4 bags of tomatoes $=$ ………………………………

   c) The cost of 9 bags of tomatoes $=$ ………………………………

3. The following items are sold at the second-hand toy shop.

R8

R35   R28   R15
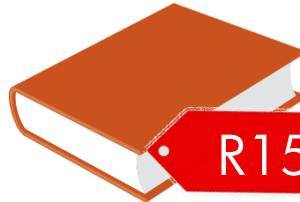
   a) How much will 4 books cost? ………………………………………

   b) How much will 13 paintbrushes cost? ………………………………

   c) How much will 8 teddy bears cost? ………………………………

   d) How much change will I receive if I pay for 5 paintbrushes with a R50 note?

       ………………………………………………………………………………………

   e) How much will 3 soccer balls and 2 books cost in total?

       ………………………………………………………………………………………

4. Nkosi is on holiday for 7 days. He does 45 push-ups every day.

    How many push-ups does he do altogether? ………………………………………

5. A factory makes 78 toys in one day. How many toys are made in:

    a) 2 days? ………………………………   b) 7 days? ………………………………