Gr 5 – 7 Master Multiplication | Part 4

Only Gr 5 – 7 Learners Must Continue.

Question 1 | 3-digit × 1-digit Numbers ["Breaking-up" Method]

1. Study:

a) $2 \times 300 = 2 \times 3 \times 100$
$= 6 \times 100$
$= 600$

b) $8 \times 400 = 8 \times 4 \times 100$
$= 32 \times 100$
$= 3\,200$

2. Complete:

a) $400 \times 2 =$ ..... b) $200 \times 3 =$ ..... c) $500 \times 4 =$ ..... d) $800 \times 5 =$ .....

$300 \times 3 =$ ..... $300 \times 5 =$ ..... $400 \times 7 =$ ..... $900 \times 8 =$ .....

3. Write in expanded form:

a) $342 = 300 + 40 + 2$ b) $583 =$ ..... + ... + ... c) $746 =$ ..... + ... + ...

4. Complete:

a) 425 (400 + 20 + 5)
× 3 (3)
15 (3 × 5)
60 (3 × 20)
+ 1200 (3 × 400)
1275

b) 384 × 2

c) 528 × 3

d) 736 × 4

5. Complete:

a) 537 (500 + 30 + 7)
× 6 (6)
^{1}42 (6 × 7)
180 (6 × 30)
+ 3000 (6 × 500)
3222

b) 679 × 4

c) 384 × 6

d) 769 × 8

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

1. Complete:

a) H T U
243 (2H + 4T + 3U)
× 2 (2U)
486 (4H + 8T + 6U)

b) H T U
334
× 2

c) H T U
232
× 3

d) H T U
302
× 3

e) H T U
234
× 2

2. Study.

Step 1:

H T U
$2^{1}23$
× 4
2

$4 \times 3U = 12$
and
$12 = 1T + 2U$

Step 2:

H T U
$2^{1}23$
× 4
92

$4 \times 2T = 8T$
and
$8T + 1T = 9T$

Step 3:

H T U
$2^{1}23$
× 4
892

$4 \times 2H = 8H$

3. Complete:

a) H T U
$3^{1}15$
× 2
630

b) 326
× 3

c) 124
× 4

d) H T U
$2^{2}16$
× 4
864

e) 215
× 4

f) 328
× 3

4. Study.

Step 1:

H T U
$3^{2}24$
× 6
4

$6 \times 4U = 24$
and
$24 = 2T + 4U$

Step 2:

H T U
$^{1}3^{2}24$
× 6
44

$6 \times 2T = 12T$
$12T + 2T = 14T$
$14T = 140$
$= 1H + 4T$

Step 3:

Th H T U
$^{1}3^{1}24$
× 6
1 944

$6 \times 3H = 18H$
$18H + 1H = 19H$
$19H = 1900$
$= 1Th + 9H$

5. Complete:

a) $^{1}3^{3}28$
× 4
1312

b) 534
× 6

c) 872
× 5

d) $^{5}7^{3}64$
× 8
6112

e) 746
× 7

f) 459
× 9

Question 3 | 300 × 20 and 600 × 40 etc.

1. Multiplication by 10 makes a number 10 times bigger: $\overset{\text{H T U}}{100} \times 10 = \overset{\text{Th H T U}}{1\,000}$

2. Complete: a) 200 × 10 = 2 000 b) 400 × 10 = ... c) 900 × 10 = ...

3. Complete: NB: 100 × 10 = 1 000.

a) 300 × 20
= 3 × 2 × 100 × 10
= 6 × 1 000
= 6 000

b) 200 × 40
= .....
= .....
= .....

c) 200 × 30 = ...

d) 400 × 20 = ...

e) 300 × 30 = ...

4. Complete:

a) 500 × 30
= 5 × 3 × 100 × 10
= 15 × 1 000
= 15 000

b) 400 × 60
= .....
= .....
= .....

c) 400 × 30 = ...

d) 700 × 40 = ...

e) 900 × 50 = ...

5. Complete:

a) 500 × 40
= 5 × 4 × 100 × 10
= 20 × 1 000
= 20 000

b) 600 × 50
= .....
= .....
= .....

c) 200 × 50 = ...

d) 500 × 80 = ...

e) 400 × 50 = ...

6. Complete:

a) 340 × 20
= 34 × 2 × 10 × 10
= 68 × 100
= 6 800

b) 230 × 30
= .....
= .....
= .....

c) 110 × 30 = ...

d) 240 × 20 = ...

e) 430 × 20 = ...

7. Complete:

a) 420 × 30
= 42 × 3 × 10 × 10
= 126 × 100
= 12 600

b) 650 × 20
= .....
= .....
= .....

c) 350 × 60
= .....
= .....
= .....

Question 4 | 3-digit × 2-digit Numbers: Part 1

1. Study:

"Breaking-up" Method

425 (400 + 20 + 5)
× 23 (20 + 3)

Part 1 = 1275:
15 (3 × 5)
60 (3 × 20)
1200 (3 × 400)

Part 2 = 8500:
100 (20 × 5)
400 (20 × 20)
+ 8000 (20 × 400)

9775

"Short" Method

Part 1:

Th H T U
4 ^{1}25
× 23
1275 ← 3 × 425

Part 2:

Th H T U
4 ^{1}25
× 23
1275 ← 3 × 425
+ 8500 ← 20 × 425
9775

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

a) 328 (300 + 20 + 8)
× 34 (30 + 4)
32 (4 × 8)
^{1}80 (4 × 20)
^{1}1200 (4 × 300)
240 (30 × 8)
600 (30 × 20)
+ 9000 (30 × 300)
11 152

b) 438 × 23

c) 528 × 64

d) 743 × 86

3. Complete using the "short" method.

a) 328
× 34
1312 [4 × 328]
+ 9840 [30 × 328]
11 152

b) 438 × 23

c) 528 × 64

d) 743 × 86

Question 5 | 3-digit × 2-digit Numbers: Part 2

Do your working out on a separate piece of paper.

1. Complete: [Easy Questions]

a)

$$\begin{array}{r} 432 \\ \times\ 23 \\ \hline 1296 \\ 8640 \\ \hline 9936 \\ \hline \end{array}$$

← 3 × 432

← 20 × 432

b)

$$\begin{array}{r} 314 \\ \times\ 13 \\ \hline 942 \\ 3140 \\ \hline 4082 \\ \hline \end{array}$$

← 3 × 314

← 10 × 314

c) 423 × 21 = ...

d) 223 × 14 = ...

e) 424 × 13 = ...

f) 224 × 24 = ...

g) 232 × 16 = ...

h) 243 × 32 = ...

2. Complete: [Challenging Questions]

a)

$$\begin{array}{r} 476 \\ \times\ 42 \\ \hline 952 \\ 19040 \\ \hline 19\,992 \\ \hline \end{array}$$

← 2 × 476

← 40 × 476

b)

$$\begin{array}{r} 876 \\ \times\ 64 \\ \hline 3504 \\ 52560 \\ \hline 56\,064 \\ \hline \end{array}$$

← 4 × 876

← 60 × 876

c) 274 × 53 = ...

d) 482 × 39 = ...

e) 497 × 35 = ...

f) 423 × 78 = ...

g) 548 × 63 = ...

h) 763 × 89 = ...

3. Calculate how many trees there are in 125 rows with 28 trees in each row.

.....

4. A grocer sells a fruit and veg hamper for R279.
What will 45 hampers cost altogether? .....

5. There are 352 kiwis in a crate.
How many kiwis are there in a dozen of the same crates?

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