



# MATHEMATICS



**N.S. Yr. 4 P.64**

**Use known number facts to  
multiply and divide mentally**

## Equipment

Paper, pencil, ruler

# MathSphere

© MathSphere P.O. Box 1234 Worthing BN13 2UJ [www.mathsphere.co.uk](http://www.mathsphere.co.uk)

## **Concepts**

This module consolidates much of the earlier work on multiplying and dividing mentally.

The key concepts are:

1. Multiplying a two or three digit number by 10 or 100. (Remember never say 'add a nought' as this leads to real problems when dealing with decimals later!)
2. Dividing multiples of 1 000 by 10 or 100.
3. Doubling multiples of 5.
4. Halving multiples of 10 up to 200.
5. General multiplication of two digits by one.

One of the key things to concentrate on is the method used when working mentally. Two pages have been included where children are asked to write down how they did the sums. Generally children find this rather tedious so it has been kept to a minimum. It is usually better to do this aspect orally so that children can learn from each other.

**Multiply by 10 and 100**

Remember – to multiply by 10 just move each digit one place to the left and if this leaves a space in the units put a nought there.

To multiply by 100 move each digit two places to the left....etc

**Complete these written questions:**

1.  $26 \times 10 =$

2.  $35 \times 10 =$

3.  $76 \times 10 =$

4.  $27 \times 100 =$

5.  $38 \times 100 =$

6.  $78 \times 100 =$

7.  $45 \times 10 =$

8.  $57 \times 10 =$

9.  $68 \times 10 =$

10.  $43 \times 100 =$

11.  $55 \times 100 =$

12.  $62 \times 100 =$

13.  $600 \times 100 =$

14.  $720 \times 100 =$

15.  $840 \times 100 =$

16.  $443 \times 100 =$

17.  $926 \times 100 =$

18.  $645 \times 100 =$

**Multiply by 10 and 100**

No adding noughts around here when you multiply by 10 or 100. Just move each digit to the left as usual and you can't go wrong.

**Complete these written questions:**

1.  $27 \times 10 =$

2.  $39 \times 10 =$

3.  $71 \times 10 =$

4.  $23 \times 100 =$

5.  $32 \times 100 =$

6.  $75 \times 100 =$

7.  $42 \times 10 =$

8.  $53 \times 10 =$

9.  $69 \times 10 =$

10.  $46 \times 100 =$

11.  $58 \times 100 =$

12.  $63 \times 100 =$

13.  $800 \times 100 =$

14.  $780 \times 100 =$

15.  $890 \times 100 =$

16.  $405 \times 100 =$

17.  $906 \times 100 =$

18.  $603 \times 100 =$

**Dividing by 10 and 100**

As division is the opposite of multiplication, move each digit one place to the right to divide by 10.  
Easy eh!

Try these:

1.  $300 \div 10 =$

2.  $500 \div 10 =$

3.  $700 \div 10 =$

4.  $2000 \div 100 =$

5.  $6000 \div 100 =$

6.  $8000 \div 100 =$

7.  $400 \div 10 =$

8.  $200 \div 10 =$

9.  $600 \div 10 =$

10.  $1000 \div$

$= 100$

11.  $3000 \div$

$= 30$

12.  $9000 \div$

$= 90$

13.  $\square \div 10 = 20$

14.  $\square \div 10 = 50$

15.  $\square \div 10 = 40$

16.  $\square \div 10 = 500$

17.  $\square \div 10 = 700$

18.  $\square \div 10 = 100$

19.  $\square \div 10 = 800$

**Dividing by 10 and 100**

Remember to move each digit one place to the right when you divide by 10...and two places when you divide by 100.

Try these:

1.  $100 \div 10 =$

2.  $700 \div 10 =$

3.  $900 \div 10 =$

4.  $6000 \div 100 =$

5.  $2000 \div 100 =$

6.  $4000 \div 100 =$

7.  $400 \div 10 =$

8.  $800 \div 10 =$

9.  $200 \div 10 =$

10.  $5000 \div$

$= 50$

11.  $7000 \div$

$= 70$

12.  $3000 \div$

$= 30$

13.  $\square \div 10 = 90$

14.  $\square \div 10 = 20$

15.  $\square \div 10 = 10$

16.  $\square \div 10 = 300$

17.  $\square \div 10 = 100$

18.  $\square \div 10 = 700$

19.  $\square \div 10 = 600$

**Doubling and halving multiples of 5**

I expect you are really quick at doubling and halving so these should be a real whizz!

1. Double 35

2. Double 75

3. Double 65

4.  $55 \times 2 =$ 5.  $45 \times 2 =$ 6.  $75 \times 2 =$ 

7. Halve 70

8. Halve 30

9. Halve 50

10.  $80 \div 2 =$ 11.  $50 \div 2 =$ 12.  $90 \div 2 =$ 

13. Double 45

14. Double 25

15. Double 85

16.  $35 \times 2 =$ 17.  $95 \times 2 =$ 18.  $65 \times 2 =$ 

19. Halve 150

20. Halve 130

21. Halve 190

22.  $110 \div 2 =$ 23.  $170 \div 2 =$ 24.  $70 \div 2 =$ 

If you've got a spare moment explain how you did these to your teacher or an adult. You could also tell a friend who finds them hard!



**Doubling and halving multiples of 5**

Doubling and halving – I expect you could almost do these in your sleep!

1. Double 25

2. Double 95

3. Double 75

4.  $65 \times 2 =$ 5.  $25 \times 2 =$ 6.  $85 \times 2 =$ 

7. Halve 90

8. Halve 70

9. Halve 30

10.  $60 \div 2 =$ 11.  $500 \div 2 =$ 12.  $70 \div 2 =$ 

13. Double 65

14. Double 55

15. Double 95

16.  $\frac{1}{2}$  of 120 =17.  $\frac{1}{2}$  of 150 =18.  $\frac{1}{2}$  of 170 =19.   $\div 2 = 65$ 20.   $\div 2 = 45$ 21.   $\div 2 = 85$ 22.  $150 \div 2 =$ 23.  $190 \div 2 =$ 24.  $130 \div 2 =$ 

If you've got a spare moment explain how you did these to your teacher or an adult. You could also tell a friend who finds them hard!





**Multiplying two digit multiples of 10**

Pencil at the ready – let's see how quickly you can manage these – all in your head!

1.  $30 \times 4 =$

2.  $50 \times 5 =$

3.  $80 \times 3 =$

4.  $20 \times 4 =$

5.  $70 \times 5 =$

6.  $60 \times 3 =$

7.  $30 \times$    $= 150$

8.  $50 \times$    $= 300$

9.  $80 \times$    $= 320$

10.  $40 \times$    $= 160$

11.  $60 \times$    $= 360$

12.  $70 \times$    $= 210$

13.  $300 = 50 \times$

14.  $350 = 50 \times$

15.  $400 = 80 \times$

16.  $240 = 60 \times$

17.  $720 = 80 \times$

18.  $500 = 10 \times$

19.   $\times 5 = 300$

20.   $\times 7 = 350$

21.   $\times 8 = 320$

22.   $\times 4 = 160$

23.   $\times 3 = 270$

24.   $\times 2 = 180$

**Multiplying two digit multiples of 10**

Ready, steady, go!  
Fly through these at the speed of  
sound!

1.  $20 \times 5 =$

2.  $60 \times 4 =$

3.  $70 \times 2 =$

4.  $30 \times 6 =$

5.  $80 \times 5 =$

6.  $70 \times 3 =$

7.  $40 \times$

$= 200$

8.  $50 \times$

$= 150$

9.  $90 \times$

$= 360$

10.  $20 \times$

$= 180$

11.  $60 \times$

$= 240$

12.  $70 \times$

$= 420$

13.  $200 = 50 \times$

14.  $450 = 50 \times$

15.  $270 = 30 \times$

16.  $480 = 60 \times$

17.  $480 = 80 \times$

18.  $330 = 10 \times$

19.

$\times 5 = 400$

20.

$\times 7 = 210$

21.

$\times 8 = 400$

22.

$\times 4 = 360$

23.

$\times 3 = 240$

24.

$\times 2 = 120$

**Explaining!**

These sums can all be done in your head, but can you write down how you did them?

eg  $13 \times 5 = 65$



10 times 5 is 50  
and 3 times 5 is 15.

Add the answers to make 65

Or even quicker:  
 $(10 \times 5) + (3 \times 5) =$   
 $50 + 15 = 65$

**Explain in the box how you did the sum.**

1.  $17 \times 5 =$

2.  $75 = 5 \times$

3.  $13 \times 4 =$

4.  $52 = 4 \times$

5.  $55 \times 2 =$

6.  $48 = 4 \times$

7.  $19 \times 5 =$

8.  $54 = 18 \times$

**Explaining!**

These sums can all be done in your head, but can you write down how you did them?

eg  $14 \times 4 = 56$



10 times 4 is 40  
and 4 times 4 is 16.

Add the answers to make 56

Or even quicker:  
 $(10 \times 4) + (4 \times 4) =$   
 $40 + 16 = 56$

**Explain in the box how you did the sum.**

1.  $17 \times 3 =$

2.  $85 = 5 \times$

3.  $15 \times 4 =$

4.  $42 = 3 \times$

5.  $36 \times 2 =$

6.  $72 = 2 \times$

7.  $14 \times 5 =$

8.  $36 = 12 \times$

**Answers****Page 3**

1. 260    2. 350    3. 760    4. 2 700    5. 3 800    6. 7 800    7. 450    8. 570  
9. 680    10. 4 300    11. 5 500    12. 6 200    13. 60 000    14. 72 000    15. 84 000  
16. 44 300    17. 92 600    18. 64 500

**Page 4**

1. 270    2. 390    3. 710    4. 2 300    5. 3 200    6. 7 500    7. 420    8. 530  
9. 690    10. 4 600    11. 5 800    12. 6 300    13. 80 000    14. 78 000    15. 89 000  
16. 40 500    17. 90 600    18. 60 300

**Page 5**

1. 30    2. 50    3. 70    4. 20    5. 60    6. 80    7. 40    8. 20  
9. 60    10. 10    11. 100    12. 100    13. 200    14. 500    15. 400  
16. 5 000    17. 7 000    18. 1 000    19. 8 000

**Page 6**

1. 10    2. 70    3. 90    4. 60    5. 20    6. 40    7. 40    8. 80  
9. 20    10. 100    11. 100    12. 100    13. 900    14. 200    15. 100  
16. 3 000    17. 1 000    18. 7 000    19. 6 000

**Page 7**

1. 70    2. 150    3. 130    4. 110    5. 90    6. 150    7. 35    8. 15  
9. 25    10. 40    11. 25    12. 45    13. 90    14. 50    15. 170    16. 70  
17. 190    18. 130    19. 75    20. 65    21. 95    22. 55    23. 85    24. 35

**Page 8**

1. 50    2. 190    3. 150    4. 130    5. 50    6. 170    7. 45    8. 35  
9. 15    10. 30    11. 250    12. 35    13. 130    14. 110    15. 190    16. 60  
17. 75    18. 85    19. 130    20. 90    21. 170    22. 75    23. 95    24. 65

**Page 9**

1. 120    2. 250    3. 240    4. 80    5. 350    6. 180    7. 5    8. 6  
9. 4    10. 4    11. 6    12. 3    13. 6    14. 7    15. 5    16. 4  
17. 9    18. 50    19. 60    20. 50    21. 40    22. 40    23. 90    24. 90

**Page 10**

1. 100    2. 240    3. 140    4. 180    5. 400    6. 210    7. 5    8. 3  
9. 4    10. 9    11. 4    12. 6    13. 4    14. 9    15. 9    16. 8  
17. 6    18. 33    19. 80    20. 30    21. 50    22. 90    23. 80    24. 60

**Page 11**

1. 85    2. 15    3. 52    4. 13    5. 110    6. 12    7. 95    8. 3

**Page 12**

1. 51    2. 17    3. 60    4. 14    5. 72    6. 36    7. 70    8. 3