

Grid Multiplication 1.

This is how you work out 23×7 using grid multiplication.

	20	3
7	140	21

$$140 + 21 = \underline{161}.$$



- A). What sums are being worked out with these grids ?
You **do not** need to work out the answers !

1).

60	8	
4		

2).

50	7	
5		

3).

20	4	
9		

4).

30	9	
6		

5).

70	1	
8		

6).

80	6	
3		

7).

40	2	
7		

8).

60	5	
9		

- B). Write down the sum being worked out in each grid.
Copy the grid and then work out the answer.

1).

40	2	
3		

2).

20	1	
6		

3).

30	2	
7		

4).

50	4	
4		

5).

30	5	
4		

6).

60	5	
3		

7).

30	7	
5		

8).

40	3	
6		

9).

50	9	
4		

10).

70	6	
3		

11).

60	6	
6		

12).

70	2	
8		

13).

30	6	
9		

14).

40	8	
8		

15).

30	8	
7		

16).

50	8	
6		

17).

20	7	
9		

18).

90	5	
7		

19).

80	3	
9		

20).

80	9	
7		

- C). Draw the appropriate grid and then solve the following problems.



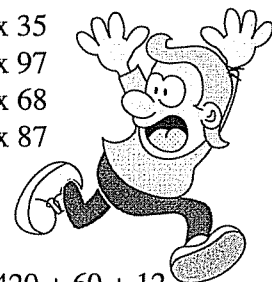
- 1). 4×28
6). 7×45
11). 9×23
16). 8×62

- 2). 3×62
7). 4×67
12). 3×57
17). 7×97

- 3). 5×73
8). 8×34
13). 4×93
18). 9×75

- 4). 7×23
9). 3×95
14). 6×84
19). 6×97

- 5). 6×35
10). 5×97
15). 7×68
20). 9×87



You can use grid multiplication to work out much harder sums, such as 36×72 .

	30	6
70	2100	420
2	60	12

$$2100 + 420 + 60 + 12 = \underline{2592}.$$

D). What sums are being worked out with these grids ?
You **do not** need to work out the answers !

1). $40 \quad 1$

20		
5		

2). $40 \quad 7$

30		
9		

3). $80 \quad 4$

60		
3		

4). $90 \quad 8$

70		
6		

5). $40 \quad 3$

90		
8		

6). $80 \quad 6$

50		
3		

7). $50 \quad 8$

20		
8		

8). $60 \quad 5$

30		
6		

E). Write down the sum being worked out in each grid.
Copy the grid and then work out the answer.

1). $30 \quad 6$

20		
3		

2). $10 \quad 7$

40		
1		

3). $40 \quad 3$

20		
7		

4). $30 \quad 4$

50		
3		

5). $20 \quad 6$

30		
4		

6). $10 \quad 8$

20		
4		

7). $30 \quad 3$

40		
2		

8). $20 \quad 4$

60		
2		

9). $70 \quad 4$

40		
1		

10). $40 \quad 5$

30		
8		

11). $20 \quad 9$

50		
7		

12). $70 \quad 8$

40		
3		

13). $80 \quad 3$

20		
6		

14). $60 \quad 8$

40		
3		

15). $70 \quad 2$

30		
7		

16). $90 \quad 4$

50		
1		

17). $60 \quad 2$

70		
6		

18). $50 \quad 1$

80		
3		

19). $30 \quad 9$

70		
2		

20). $90 \quad 5$

20		
9		

F). Draw the appropriate grid and then solve the following problems.

1). 34×64

2). 57×63

3). 38×54

4). 93×18

5). 41×32

6). 53×36

7). 63×39

8). 72×48

9). 19×74

10). 38×92

11). 69×48

12). 74×38

13). 63×85

14). 78×69

15). 85×59

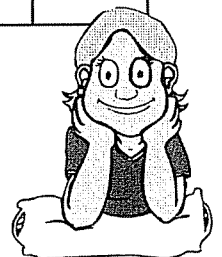
16). 97×84

17). 76×85

18). 49×98

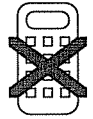
19). 96×87

20). 79×86





Division.



Copy and solve the following questions.

1). $4 \overline{) 92}$ 2). $6 \overline{) 84}$ 3). $3 \overline{) 93}$ 4). $5 \overline{) 80}$

5). $8 \overline{) 96}$ 6). $4 \overline{) 76}$ 7). $7 \overline{) 98}$ 8). $6 \overline{) 90}$

9). $81 \div 3$ 10). $96 \div 6$ 11). $90 \div 5$ 12). $72 \div 4$

13). $5 \overline{) 820}$ 14). $4 \overline{) 852}$ 15). $3 \overline{) 618}$ 16). $9 \overline{) 936}$

17). $6 \overline{) 642}$ 18). $3 \overline{) 948}$ 19). $7 \overline{) 980}$ 20). $4 \overline{) 948}$

21). $892 \div 4$ 22). $627 \div 3$ 23). $984 \div 4$ 24). $980 \div 5$

25). $848 \div 8$ 26). $882 \div 6$ 27). $963 \div 9$ 28). $763 \div 7$

29). $3 \overline{) 7023}$ 30). $5 \overline{) 8420}$ 31). $6 \overline{) 6336}$ 32). $8 \overline{) 8784}$

33). $7 \overline{) 9506}$ 34). $9 \overline{) 9072}$ 35). $6 \overline{) 8808}$ 36). $8 \overline{) 9984}$

37). $9530 \div 5$ 38). $7476 \div 7$ 39). $9981 \div 9$ 40). $8472 \div 12$

41). $7896 \div 8$ 42). $9482 \div 11$ 43). $6276 \div 12$ 44). $6120 \div 6$

45). $5 \overline{) 81755}$ 46). $4 \overline{) 92268}$ 47). $6 \overline{) 66582}$ 48). $3 \overline{) 89619}$

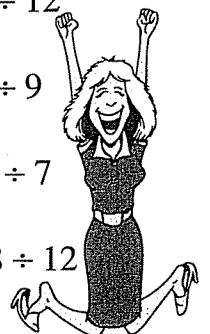
49). $7 \overline{) 83020}$ 50). $9 \overline{) 97254}$ 51). $8 \overline{) 96448}$ 52). $7 \overline{) 84028}$

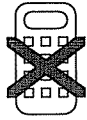
53). $81252 \div 6$ 54). $76012 \div 4$ 55). $86886 \div 9$ 56). $72048 \div 12$

57). $91014 \div 7$ 58). $61854 \div 6$ 59). $78912 \div 8$ 60). $80154 \div 9$

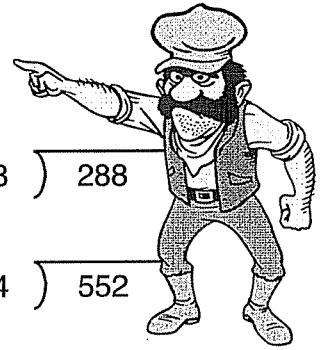
61). $196224 \div 3$ 62). $118240 \div 5$ 63). $281238 \div 6$ 64). $670894 \div 7$

65). $325332 \div 9$ 66). $665301 \div 7$ 67). $725648 \div 8$ 68). $1180248 \div 12$

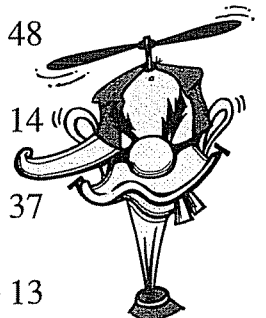




Long Division.

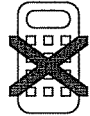


- | | | | |
|----------------------------|----------------------------|----------------------------|----------------------------|
| 1). $12 \overline{) 276}$ | 2). $13 \overline{) 416}$ | 3). $12 \overline{) 420}$ | 4). $18 \overline{) 288}$ |
| 5). $15 \overline{) 270}$ | 6). $21 \overline{) 336}$ | 7). $19 \overline{) 456}$ | 8). $24 \overline{) 552}$ |
| 9). $12 \overline{) 228}$ | 10). $17 \overline{) 221}$ | 11). $13 \overline{) 312}$ | 12). $14 \overline{) 182}$ |
| 13). $15 \overline{) 345}$ | 14). $16 \overline{) 416}$ | 15). $14 \overline{) 350}$ | 16). $19 \overline{) 437}$ |
| 17). $18 \overline{) 612}$ | 18). $23 \overline{) 782}$ | 19). $17 \overline{) 714}$ | 20). $28 \overline{) 728}$ |
| 21). $17 \overline{) 442}$ | 22). $23 \overline{) 943}$ | 23). $26 \overline{) 806}$ | 24). $32 \overline{) 768}$ |
| 25). $33 \overline{) 858}$ | 26). $25 \overline{) 475}$ | 27). $32 \overline{) 448}$ | 28). $31 \overline{) 527}$ |
| 29). $44 \overline{) 924}$ | 30). $26 \overline{) 910}$ | 31). $33 \overline{) 924}$ | 32). $52 \overline{) 936}$ |
| 33). $41 \overline{) 984}$ | 34). $29 \overline{) 899}$ | 35). $36 \overline{) 972}$ | 36). $27 \overline{) 702}$ |
| 37). $62 \overline{) 806}$ | 38). $71 \overline{) 852}$ | 39). $54 \overline{) 810}$ | 40). $83 \overline{) 996}$ |
| 41). $882 \div 42$ | 42). $936 \div 39$ | 43). $784 \div 56$ | 44). $979 \div 89$ |
| 45). $841 \div 29$ | 46). $833 \div 17$ | 47). $874 \div 46$ | 48). $962 \div 37$ |
| 49). $936 \div 72$ | 50). $864 \div 24$ | 51). $891 \div 33$ | 52). $848 \div 16$ |
| 53). $938 \div 67$ | 54). $672 \div 42$ | 55). $754 \div 58$ | 56). $912 \div 48$ |
| 57). $925 \div 37$ | 58). $448 \div 28$ | 59). $784 \div 16$ | 60). $826 \div 14$ |
| 61). $884 \div 26$ | 62). $935 \div 85$ | 63). $966 \div 46$ | 64). $666 \div 37$ |
| 65). $770 \div 55$ | 66). $782 \div 46$ | 67). $980 \div 49$ | 68). $663 \div 13$ |

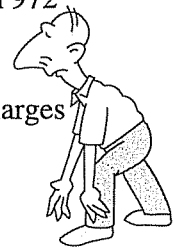




Long Multiplication and Division Problems.



- 1). Bottles of Lemonade are 64 p each. John needs 18 for a party. How much does he spend ?
- 2). There are 864 pupils and staff in a school. They all go to visit London on a school trip. How many 36 seat coaches do they need to hire ?
- 3). Drawing pins come in boxes of 48. The Mathematics Department orders 17 boxes, how many drawing pins have they ordered ?
- 4). A train carriage can hold 118 people. If a train has 14 carriages, how many people can it transport ?
- 5). A roadside florist sells only tulips. They cost 32p each. He takes £ 8.96 at the end of the day. How many tulips has he sold ?
- 6). Mandy the model maker is building a tank out of matches. Matches come in boxes of 52. She works out she needs 832 matches. How many boxes does she need to buy ?
- 7). Bobby thinks there is a Salad Cream shortage and goes shopping. Salad Cream comes in bottles weighing 285 g. He buys 42. How heavy is all the Salad Cream in grams ?
- 8). Jenny has a catering pack of tomato ketchup. It has 882 ml in it. Her job is to put it into tiny 18 ml sachets. How many sachets can she fill ?
- 9). Milk is carried in crates which hold 24 bottles. A milk man sets off on his round with 142 full crates, all for delivery. How many bottles of milk is he delivering ?
- 10). Gemma is holding a Garden Party. She needs 6149 biscuits. A packet holds 43 biscuits.
 - a). How many packets must she buy ?
 - b). One packet costs 97p. How much is she going to spend on biscuits ?
- 11). Laura holds a raffle to raise money for local charities. She sells 36 tickets at £ 4.75 each.
 - a). How much does she raise ?
 - b). The money is to be shared equally between 25 charities. How much will each get ?
- 12). The new intake in a large school is 468. They are to be put into classes of 26 pupils each.
 - a). How many classes are there to be ?
 - b). Each pupil from the new intake pays 54p towards the School Fund. How much will the new intake contribute to the School Fund ?
- 13). The 36 workers from a chocolate factory go on a staff outing. The owner gives them 972 bars of chocolate for the journey.
 - a). How many bars of chocolate do they get each ?
 - b). Unfortunately it is a bumpy journey and everyone is sick! The coach driver charges them £ 88.20 to clear up the mess. How much do they each have to pay ?
- 14). A train holds 342 people. Each person paid £37 for a ticket.
 - a). How much was paid in total for the tickets?
 - b). The train company works out that on average each customer pays 87p for food from the Buffet Trolley. How much would the Buffet Trolley take on this journey ?



Real Life Problems.

- 1). Bottles of Cola are 44 p each. John needs as many as he can get. He has £6.50.
 - a). How many can he buy ?
 - b). How much change would he get back ?
- 2). There are 900 pupils and staff in a school. They all go to visit London on a school trip.
 - a). How many 42 seat coaches do they need to hire ?
 - b). How many spare seats will there be ?
- 3). Paperclips come in boxes of 52. The Mathematics Department needs 800 paperclips ?
 - a). How many boxes do they need to buy?
 - b). How many spare paperclips will there be ?
- 4). A train has 15 carriages, each carriage can hold up to 68 people. Bury F.C. wishes to take 905 football supporters to an away match.
 - a). Will there be enough room on the train ? (Show working out).
 - b). Calculate how too many/few seats there are?
- 5). A roadside florist sells only roses. They cost 28p each.
 - a). A man asks for £5 worth. How many roses will he get ?
 - b). How much change will he get ?
- 6). Fiona the model maker is building a ship out of matches. Matches come in boxes of 47. She works out she needs 980 matches.
 - a). How many boxes does she need to buy ?
 - b). How many spare matches will she have ?
 - c). Each box of matches costs 36p. How much will Fiona spend on matches ?
- 7). Sarah has a catering pack of Salad Cream. It has 740 ml in it. Her job is to put it into tiny 23 ml sachets.
 - a). How many sachets can she fill ?
 - b). How much will she have left over ?
 - c). The sachets are to be charged at 18p each. How much will she get for all the full sachets?
- 8). Hazel is holding a Garden Party. She needs 4000 biscuits. A packet holds 36 biscuits.
 - a). How many packets must she buy ?
 - b). How many extra biscuits will she have left ?
 - c). One packet costs 54p. How much is she going to spend on biscuits ?
- 9). The new intake in a large school is 370. They are to be put into classes of 28 pupils each.
 - a). How many classes are there to be ?
 - b). If all the classes except the last one have 28 pupils in, how many will the last class have in it ?
 - c). Each pupil from the new intake pays £1.25 towards the School Fund. How much will the new intake contribute to the School Fund ?
- 10). A train can hold 448 people. Each person on the train will pay £68 for a ticket.
 - a). If the train is full, how much did all the tickets cost ?
 - b). The train has 16 carriages, how many people will be in a carriage.
 - c). For this journey there are only 328 passengers
 - i). What is the least number of carriages the train would need ?
 - ii). How many spare seats would there be ?

