

Yr 4 Multiplication and Division Unit 1 (4567)

Additional teacher instructions for practice sheets

These notes indicate which practice sheets are most appropriate for which groups.

Day 1 9 times table Sheet 1

Working towards ARE / Working at ARE / Greater Depth

Working towards ARE start at Q1 and do up to Q12.

Working at ARE start at Q9.

Greater Depth start at Q9 and aim to complete the challenge.

Day 2 7 times table Sheet 1

Working towards ARE

Day 2 7 times table Sheet 2

Working at ARE

Day 2 7 times table Sheet 3

Greater Depth

Day 3 The 11 and 12 times tables Sheet 1

Working towards ARE

Day 3 The 11 and 12 times tables Sheet 2

Working at ARE / Greater Depth

Greater Depth aim to complete the challenge

9 times table

Sheet 1

Complete these calculations:

1) $\times 9 = 90$

2) $2 \times 9 =$

3) $\times 9 = 9$

4) $5 \times 9 =$

5) $27 \div 9 =$

6) $\div 9 = 1$

7) $90 \div 9 =$

8) $\div 9 = 4$

9) $6 \times 9 =$

10) $27 =$ $\times 9$

11) $\times 9 = 36$

12) $= 12 \times 9$

13) $99 \div 9 =$

14) $\div 9 = 2$

15) $\div 9 = 5$

16) $81 \div 9 =$

17) $\times 9 = 99$

18) $63 = 9 \times$

19) $9 \times 8 =$

20) $= 9 \times 9$

21) $= 54 \div 9$

22) $\div 9 = 7$

23) $72 \div 9 =$

24) $12 =$ $\div 9$

Challenge

Try these strategies for multiplying by 9 to find 15×9 and 21×9 :

Double the number three times and add the original number.

<input type="radio"/>	e.g.	6
<input type="radio"/>	$6 \times 2 = 12$	$12 \times 2 = 24$
<input type="radio"/>	$24 \times 2 = 48$	$48 + 6 = 54$

Multiply the number by 10 and subtract the original number.

<input type="radio"/>	e.g.	6
<input type="radio"/>	$6 \times 10 = 60$	
<input type="radio"/>	$60 - 6 = 54$	

Multiply the number by 3, then multiply that product by 3.

<input type="radio"/>	e.g.	6
<input type="radio"/>	$6 \times 3 = 18$	
<input type="radio"/>	$18 \times 3 = 54$	

Write a sentence or two to explain why each of these works.

7 times table

Sheet 1

Use this grid to complete the calculations using the 7 times table.

1	2	3	4	5	6	7	8	9	10	11	12
2	4	6	8	10	12	14	16	18	20	22	24
3	6	9	12	15	18	21	24	27	30	33	36
4	8	12	16	20	24	28	32	36	40	44	48
5	10	15	20	25	30	35	40	45	50	55	60
6	12	18	24	30	36	42	48	54	60	66	72
7	14	21	28	35	42	49	56	63	70	77	84
8	16	24	32	40	48	56	64	72	80	88	96
9	18	27	36	45	54	63	72	81	90	99	108
10	20	30	40	50	60	70	80	90	100	110	120
11	22	33	44	55	66	77	88	99	110	121	132
12	24	36	48	60	72	84	96	108	120	132	144

$7 \times 4 = \square$

$42 = 7 \times \square$

$\square \times 7 = 21$

$63 \div 7 = \square$

$8 \times 7 = \square$

$7 \div \square = 7$

$\square \div 7 = 6$

$7 \times \square = 14$

$\square = 7 \times 11$

$\square \div 7 = 10$

$\square \times 7 = 49$

$84 = \square \times 7$

7 times table

Sheet 2

Shade all the multiples of 7 on this grid.

Use it to complete the calculations using the 7 times table.

1	2	3	4	5	6	7	8	9	10	11	12
2	4	6	8	10	12	14	16	18	20	22	24
3	6	9	12	15	18	21	24	27	30	33	36
4	8	12	16	20	24	28	32	36	40	44	48
5	10	15	20	25	30	35	40	45	50	55	60
6	12	18	24	30	36	42	48	54	60	66	72
7	14	21	28	35	42	49	56	63	70	77	84
8	16	24	32	40	48	56	64	72	80	88	96
9	18	27	36	45	54	63	72	81	90	99	108
10	20	30	40	50	60	70	80	90	100	110	120
11	22	33	44	55	66	77	88	99	110	121	132
12	24	36	48	60	72	84	96	108	120	132	144

$$7 \times 4 = \square$$

$$35 = 7 \times \square$$

$$\square \div 7 = 8$$

$$7 \times 12 = \square$$

$$\square \div 7 = 6$$

$$7 \times \square = 21$$

$$\square = 7 \times 9$$

$$7 = \square \div 7$$

$$7 \div \square = 7$$

Challenge

Shade the multiples of 7 on the right hand grid. Look at the pattern and describe it.

This grid has 8 columns. If the grid had 7 columns, what would the pattern be?

If the grid had 9 columns, what would the pattern be?

What if the grid had 6 columns?

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56
57	58	59	60	61	62	63	64
65	66	67	68	69	70	71	72
73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88
89	90	91	92	93	94	95	96

7 times table

Sheet 3

Write the multiples of 7 on this grid.

Use it to complete the calculations using the 7 times table.

1	2	3	4	5	6		8	9	10	11	12
2	4	6	8	10	12		16	18	20	22	24
3	6	9	12	15	18		24	27	30	33	36
4	8	12	16	20	24		32	36	40	44	48
5	10	15	20	25	30		40	45	50	55	60
6	12	18	24	30	36		48	54	60	66	72
8	16	24	32	40	48		64	72	80	88	96
9	18	27	36	45	54		72	81	90	99	108
10	20	30	40	50	60		80	90	100	110	120
11	22	33	44	55	66		88	99	110	121	132
12	24	36	48	60	72		96	108	120	132	144

$$7 \times 4 = \square$$

$$42 = 7 \times \square$$

$$\square \div 7 = 8$$

$$7 \times 12 = \square$$

$$\square \times 7 = 77$$

$$7 \times \square = 21$$

$$9 = \square \div 7$$

$$\square \times 7 = 49$$

$$\square \div 7 = 1$$

Challenge

Shade the multiples of 7 on the right hand grid. Look at the pattern and describe it.

This grid has 8 columns. If the grid had 7 columns, what would the pattern be?

If the grid had 9 columns, what would the pattern be?

What if the grid had 6 columns?

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56
57	58	59	60	61	62	63	64
65	66	67	68	69	70	71	72
73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88
89	90	91	92	93	94	95	96

The 11 and 12 times tables

Sheet 1

Section A

Complete these calculations:

a) $3 \times 11 =$

b) $6 \times 11 =$

c) $2 \times 11 =$

d) $7 \times 11 =$

e) $11 \times 11 =$

f) $1 \times 11 =$

g) $9 \times 11 =$

h) $4 \times 11 =$

i) $12 \times 11 =$

j) $8 \times 11 =$

k) $10 \times 11 =$

l) $5 \times 11 =$

Section B

Look at each of the answers above in turn.

Add the first number in the calculation to the answer.

Write a new list: a) to l) with these answers. The first two are done for you.

a) $33 + 3 = 36$

b) $66 + 6 = 72$

c) $22 + 2 =$

d)

e)

f)

g)

h)

i)

j)

k)

l)

Section C

Now do these:

a) $3 \times 12 =$

b) $6 \times 12 =$

c) $2 \times 12 =$

d) $7 \times 12 =$

e) $11 \times 12 =$

f) $1 \times 12 =$

g) $9 \times 12 =$

h) $4 \times 12 =$

i) $12 \times 12 =$

j) $8 \times 12 =$

k) $10 \times 12 =$

l) $5 \times 12 =$

Compare your answers for Section C with your answers for Section B.

Can you explain what has happened?

The 11 and 12 times tables

Sheet 2

Complete these calculations:

1) $11 \times 4 = \square$

2) $10 \times 11 = \square$

3) $\square \div 11 = 2$

4) $12 \times 3 = \square$

5) $5 \times 12 = \square$

6) $12 \times 7 = \square$

7) $\square \div 11 = 9$

8) $\square \times 12 = 48$

9) $66 = 11 \times \square$

10) $12 \times \square = 144$

11) $\square \div 12 = 6$

12) $\square = 11 \times 12$

13) $11 \div \square = 1$

14) $\square = 12 \times 7$

15) $11 \times \square = 132$

16) $\square \times 12 = 108$

17) $\square \div 12 = 8$

18) $\square = 12 \times 12$

Challenge

Look at these strategies for multiplying by 12. Explain why each one works.

Multiply by 3 then double the answer twice.

e.g.	7
	$7 \times 3 = 21$
	$21 \times 2 = 42$ $42 \times 2 = 84$

Multiply the number by 10 and add twice the original number.

e.g.	7
	$7 \times 10 = 70$
	$70 + 14 = 84$

Multiply the number by 4 then multiply that answer by 3.

e.g.	7
	$7 \times 4 = 28$
	$28 + 28 + 28 = 84$

Multiplication and division

Answers

Day 1 9 times table Sheet 1

- 1) $10 \times 9 = 90$
- 2) $2 \times 9 = 18$
- 3) $1 \times 9 = 9$
- 4) $5 \times 9 = 45$
- 5) $27 \div 9 = 3$
- 6) $9 \div 9 = 1$
- 7) $90 \div 9 = 10$
- 8) $36 \div 9 = 4$
- 9) $6 \times 9 = 54$
- 10) $27 = 3 \times 9$
- 11) $4 \times 9 = 36$
- 12) $108 = 12 \times 9$
- 13) $99 \div 9 = 11$
- 14) $18 \div 9 = 2$
- 15) $45 \div 9 = 5$
- 16) $81 \div 9 = 9$
- 17) $11 \times 9 = 99$
- 18) $63 = 9 \times 7$
- 19) $9 \times 8 = 72$
- 20) $81 = 9 \times 9$
- 21) $6 = 54 \div 9$
- 22) $63 \div 9 = 7$
- 23) $72 \div 9 = 8$
- 24) $12 = 108 \div 9$

Challenge

Double the number three times and add the original number.

$$15 \times 2 = 30, 30 \times 2 = 60$$

$$21 \times 2 = 42, 42 \times 2 = 84$$

$$60 \times 2 = 120, 120 + 15 = 135$$

$$84 \times 2 = 168, 168 + 21 = 189$$

Multiply the number by 10 and subtract the original number.

$$15 \times 10 = 150, 150 - 15 = 135$$

$$21 \times 10 = 210, 210 - 21 = 189$$

Multiply the number by 3, then multiply that product by 3.

$$15 \times 3 = 45, 45 \times 3 = 135$$

$$21 \times 3 = 63, 63 \times 3 = 189$$

Children's written explanations should show understanding of how each method builds towards generating '9 lots', e.g. the first method creates '8 lots' by doubling three times, then a 'ninth lot' by adding the original number...

Day 2 7 times table Sheet 1

- $7 \times 4 = 28$
- $42 \div 7 = 6$
- $42 = 7 \times 6$
- $7 \times 2 = 14$
- $3 \times 7 = 21$
- $77 = 7 \times 11$
- $63 \div 7 = 9$
- $70 \div 7 = 10$
- $8 \times 7 = 56$
- $7 \times 7 = 49$
- $7 \div 1 = 7$
- $84 = 12 \times 7$

Day 2 7 times table Sheet 2

- $7 \times 4 = 28$
- $35 = 7 \times 5$
- $56 \div 7 = 8$
- $7 \times 12 = 84$
- $42 \div 7 = 6$
- $7 \times 3 = 21$
- $63 = 7 \times 9$
- $7 = 49 \div 7$
- $7 \div 1 = 7$

Challenge

The pattern moves back by 1 on each row.

If it had 7 columns it would be straight down.

If it had 9 columns it would drop back by 2 on each row.

If it had 6 columns it would move forward by 1 on each row.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56
57	58	59	60	61	62	63	64
65	66	67	68	69	70	71	72
73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88
89	90	91	92	93	94	95	96

Multiplication and division

Answers

Day 2 7 times table Sheet 3

$7 \times 4 = 28$

$42 = 7 \times 6$

$56 \div 7 = 8$

$7 \times 12 = 84$

$11 \times 7 = 77$

$7 \times 3 = 21$

$9 = 63 \div 7$

$7 \times 7 = 49$

$7 \div 7 = 1$

Challenge

The pattern moves back by 1 on each row.

If it had 7 columns it would be straight down.

If it had 9 columns it would drop back by 2 on each row.

If it had 6 columns it would move forward by 1 on each row.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56
57	58	59	60	61	62	63	64
65	66	67	68	69	70	71	72
73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88
89	90	91	92	93	94	95	96

Day 3 The 11 and 12 times tables Sheet 1

Section A

$a) 3 \times 11 = 33$

$b) 6 \times 11 = 66$

$c) 2 \times 11 = 22$

$d) 7 \times 11 = 77$

$e) 11 \times 11 = 121$

$f) 1 \times 11 = 11$

$g) 9 \times 11 = 99$

$h) 4 \times 11 = 44$

$i) 12 \times 11 = 132$

$j) 8 \times 11 = 88$

$k) 10 \times 11 = 110$

$l) 5 \times 11 = 55$

Section B

$a) 33 + 3 = 36$

$b) 66 + 6 = 72$

$c) 22 + 2 = 24$

$d) 77 + 7 = 84$

$e) 121 + 11 = 132$

$f) 11 + 1 = 12$

$g) 99 + 9 = 108$

$h) 44 + 4 = 48$

$i) 132 + 12 = 144$

$j) 88 + 8 = 96$

$k) 110 + 10 = 120$

$l) 55 + 5 = 60$

Section C

$a) 3 \times 12 = 36$

$b) 6 \times 12 = 72$

$c) 2 \times 12 = 24$

$d) 7 \times 12 = 84$

$e) 11 \times 12 = 132$

$f) 1 \times 12 = 12$

$g) 9 \times 12 = 108$

$h) 4 \times 12 = 48$

$i) 12 \times 12 = 144$

$j) 8 \times 12 = 96$

$k) 10 \times 12 = 120$

$l) 5 \times 12 = 60$

Multiplication and division

Answers

Day 3 The 11 and 12 times tables Sheet 2

- | | | |
|--------------------------|-------------------------|--------------------------|
| 1) $11 \times 4 = 44$ | 2) $10 \times 11 = 110$ | 3) $22 \div 11 = 2$ |
| 4) $12 \times 3 = 36$ | 5) $5 \times 12 = 60$ | 6) $12 \times 7 = 84$ |
| 7) $99 \div 11 = 9$ | 8) $4 \times 12 = 48$ | 9) $66 = 11 \times 6$ |
| 10) $12 \times 12 = 144$ | 11) $72 \div 12 = 6$ | 12) $132 = 11 \times 12$ |
| 13) $11 \div 11 = 1$ | 14) $84 = 12 \times 7$ | 15) $11 \times 12 = 132$ |
| 16) $9 \times 12 = 108$ | 17) $96 \div 12 = 8$ | 18) $144 = 12 \times 12$ |

Challenge

Look at these strategies for multiplying by 12.

Each of these methods works because you are still finding 12 'lots of' the original number.

Multiply by 3 then double the answer twice.
 $\times (3 \times 2 \times 2)$ is the same as $\times 12$

Multiply the number by 10 and add twice the original number.
Here you find 10 'lots of' the original number and 2 'lots of' it, then add them together to make 12 lots altogether.

Multiply the number by 4 then multiply that answer by 3.
 $\times (4 \times 3)$ is the same as $\times 12$