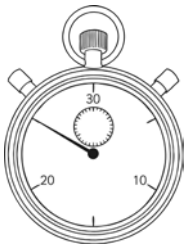
Beat the Clock



Score: _____ **Time:** _____

x	3	4	8	5	10
4					
2					
6					
12					
3					
7					
1					
5					
11					
10					
9					
8					

My target for next time is _____

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1) a) 3 × 2 = 6 or 2 × 3 = 6
   b) 30 × 2 = 60 or 20 × 3 = 60
   c) 8 × 3 = 24 or 3 × 8 = 24
   d) 80 × 3 = 240 or 30 × 8 = 240
   e) 4 × 5 = 20 or 5 × 4 = 20
   f) 40 × 5 = 200 or 50 × 4 = 200
   g) 10 × 3 = 30 or 3 × 10 = 30
   h) 100 × 3 = 300 or 30 × 10 = 300

2) There are 6 columns of 4 boxes.
   6 × 4 = 24
   There are 24 boxes altogether.
   Each box contains ten tennis balls.
   There are 6 columns of 40 balls.
   6 × 40 = 240
   There are 240 balls altogether.

3)

7 × 5 = 35	3 × 4 = 12	6 × 8 = 48	64 ÷ 8 = 8
70 × 5 = 350	30 × 4 = 120	60 × 8 = 480	640 ÷ 8 = 80
5 × 70 = 350	4 × 30 = 120	8 × 60 = 480	640 ÷ 80 = 8
50 × 7 = 350	40 × 3 = 120	80 × 6 = 480	80 × 8 = 640
7 × 50 = 350	3 × 40 = 120	6 × 80 = 480	8 × 80 = 640
350 ÷ 50 = 7	120 ÷ 40 = 3	480 ÷ 80 = 6	
350 ÷ 7 = 50	120 ÷ 3 = 40	480 ÷ 6 = 80	
350 ÷ 5 = 70	120 ÷ 4 = 30	480 ÷ 8 = 60	
350 ÷ 70 = 5	120 ÷ 30 = 4	480 ÷ 60 = 8	

1) Thomas is not correct. He has not understood that, when one of the numbers in the calculation that he wants to solve is ten times bigger, then the answer will also be ten times bigger. He has worked out that the answer to 8 × 5 is 40. He now needs to multiply the answer by 10 to calculate 80 × 5, as 80 is ten times larger than 8.

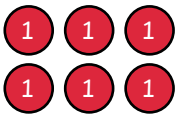
2) Geri is correct. 8 × 5 is 40. 80 × 5 and 50 × 8 will both be ten times larger than 40, because in each case one number in the calculation has been made ten times larger. The answer to both calculations is 400.
   Children may prove this by drawing arrays for 8 × 5 and 5 × 8, or by using manipulatives such as place value counters to represent 80 × 5 and 50 × 8.

1) Children should choose two from the following options. Commutative facts may also be given.

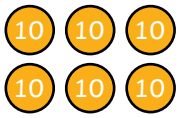
240	160	180
40 × 6, 60 × 4 30 × 8, 80 × 3 120 × 2, 12 × 20	80 × 2, 20 × 8 40 × 4	90 × 2, 20 × 9 60 × 3, 30 × 6
120	**360**	**720**
30 × 4, 40 × 3 20 × 6, 60 × 2	90 × 4, 40 × 9 120 × 3, 12 × 30, 60 × 6	60 × 12, 120 × 6 80 × 9, 90 × 8

2) a) Screen A, B, D or H
   b) Screen A – 48 rows
   Screen B – 40 rows
   Screen D – 24 rows
   Screen F – 8 rows

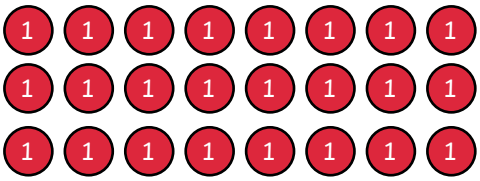
1) Complete the calculation for each set of place value counters.



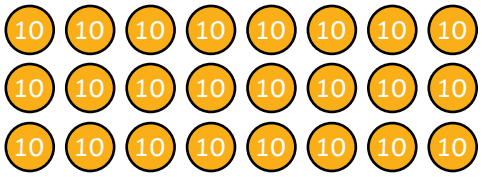
a) ____ × ____ = ____



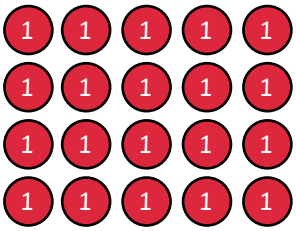
b) ____ × ____ = ____



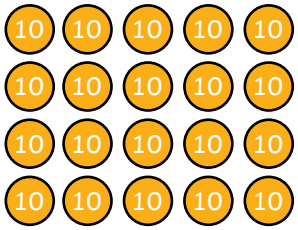
c) ____ × ____ = ____



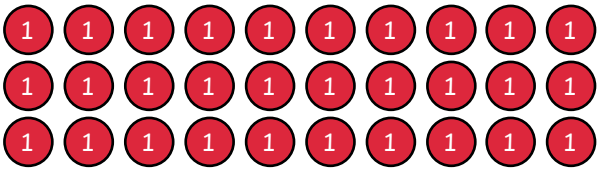
d) ____ × ____ = ____



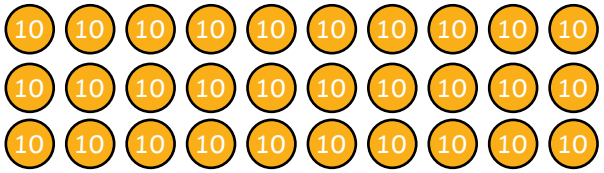
e) ____ × ____ = ____



f) ____ × ____ = ____

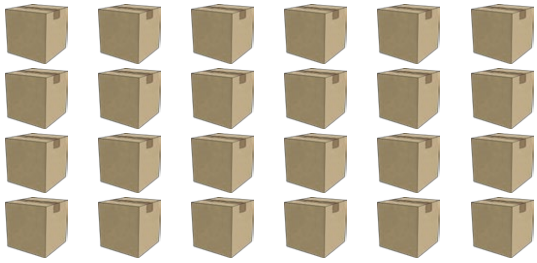


g) ____ × ____ = ____



h) ____ × ____ = ____

2)



There are _____ columns of _____ boxes.

_____ × _____ = _____

There are _____ boxes altogether.

Each box contains ten tennis balls.

There are _____ columns of _____ balls.

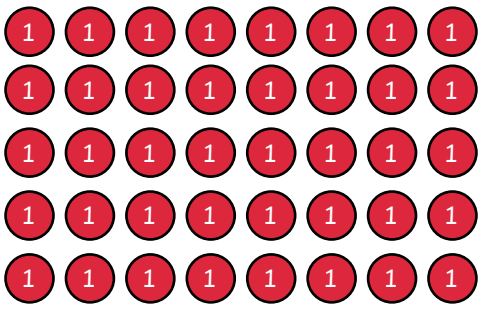
_____ × _____ = _____

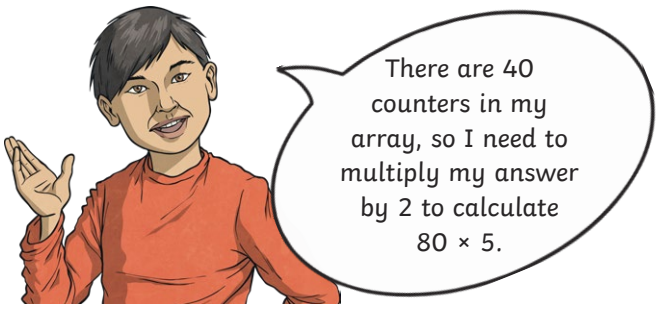
There are _____ balls altogether.

3) If we know that 7 × 5 = 35, we know that 70 × 5 = 350. Complete the fact families for each calculation.

7 × 5 = 35	3 × 4 = 12	6 × 8 = 48	64 ÷ 8 = 8
70 × 5 = 350	30 × 4 = _____	_____ × 8 = 480	640 ÷ 8 = _____
5 × 70 = 350	_____ × _____ = _____	_____ × _____ = _____	_____ ÷ _____ = _____
50 × 7 = 350	_____ × _____ = _____	_____ × _____ = _____	_____ × _____ = _____
7 × 50 = 350	_____ × _____ = _____	_____ × _____ = _____	_____ × _____ = _____
350 ÷ 50 = 7	_____ ÷ _____ = _____	_____ ÷ _____ = _____	
350 ÷ 7 = 50	_____ ÷ _____ = _____	_____ ÷ _____ = _____	
350 ÷ 5 = 70	_____ ÷ _____ = _____	_____ ÷ _____ = _____	
350 ÷ 70 = 5	_____ ÷ _____ = _____	_____ ÷ _____ = _____	

1) Thomas is calculating 80 × 5. He has created this array using place value counters to help him.





Do you agree? Explain your reasons.

2) Geri says that 80 × 5 will have the same answer as 50 × 8. Do you agree? How could you use arrays and the times table facts you know to prove your answer?

1) Use your times tables knowledge to find two multiplication facts that make each total.

240	**160**	**180**
120	**360**	**720**

2) Ms Patel is booking cinema tickets for a whole-school visit. She wants to choose a screen at the cinema where the 480 pupils on the trip can fill up each row of seats and there won't be any rows with empty spaces.

Screen	A	B	C	D	E	F	G	H
Seats in Each Row	10	12	18	20	35	45	50	60

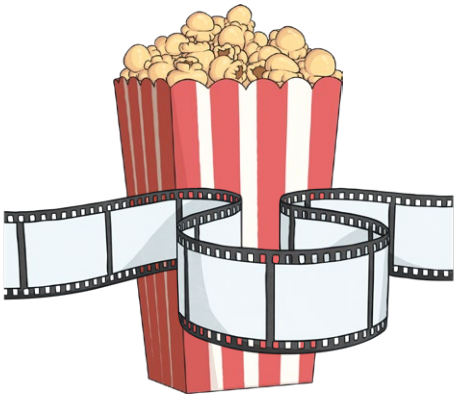
a) Which of the following screens would be suitable for the trip?

_____

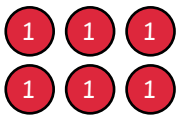
b) To fit all 480 children in, how many rows would Ms Patel need to reserve in each different suitable screen?

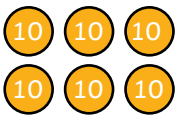
_____

_____

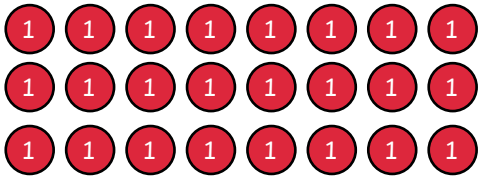


1) Complete the calculation for each set of place value counters.

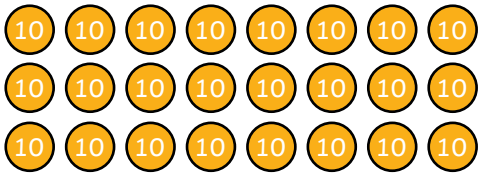




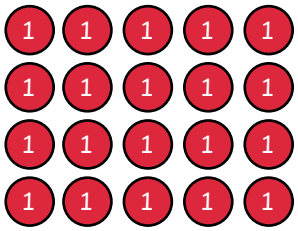
a) ____ × ____ = ____ **b)** ____ × ____ = ____

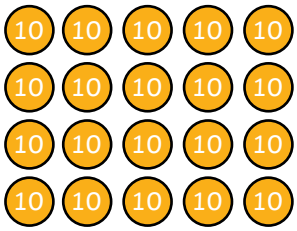


c) ____ × ____ = ____

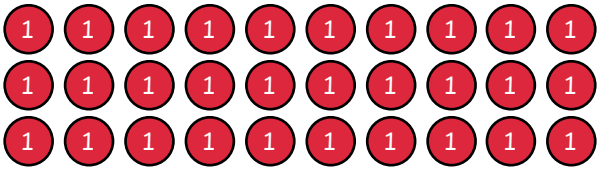


d) ____ × ____ = ____

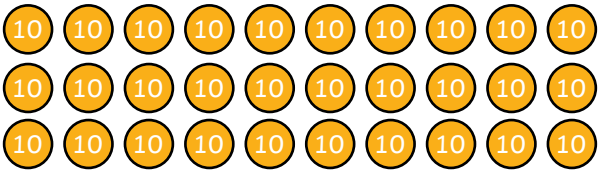




e) ____ × ____ = ____ **f)** ____ × ____ = ____

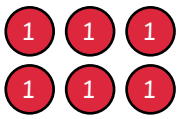


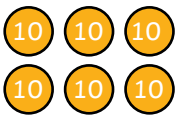
g) ____ × ____ = ____



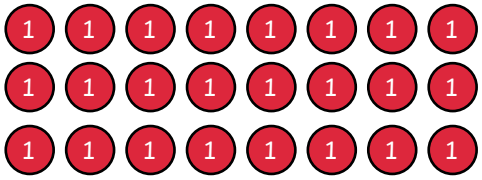
h) ____ × ____ = ____

1) Complete the calculation for each set of place value counters.

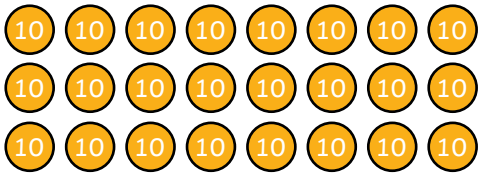




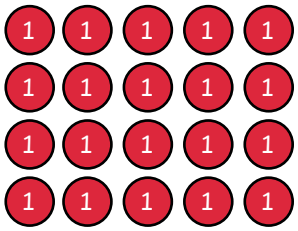
a) ____ × ____ = ____ **b)** ____ × ____ = ____

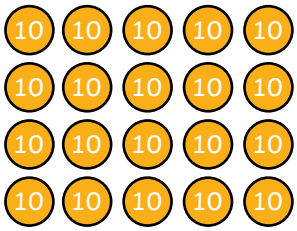


c) ____ × ____ = ____



d) ____ × ____ = ____





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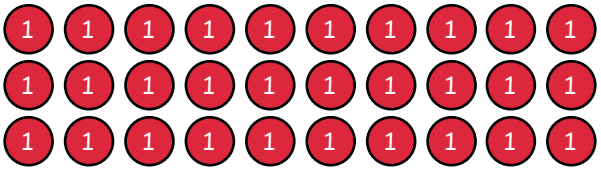

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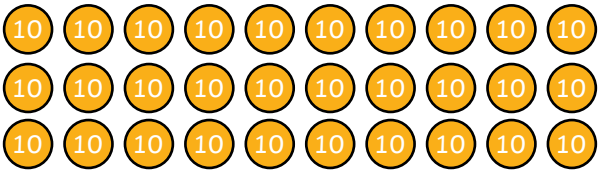

h) ____ × ____ = ____

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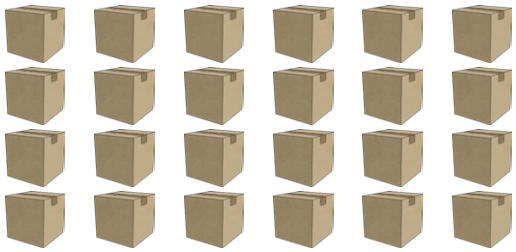
2)



There are _____ columns of _____ boxes.

_____ × _____ = _____

There are _____ boxes altogether.

Each box contains ten tennis balls.

There are _____ columns of _____ balls.

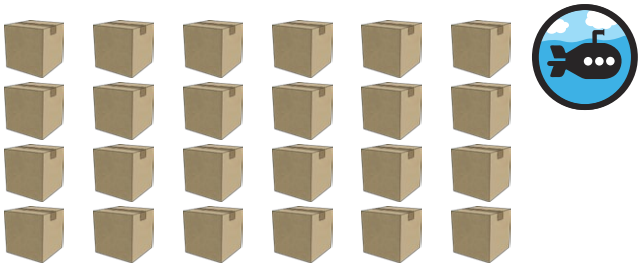
_____ × _____ = _____

There are _____ balls altogether.

3) If we know that 7 × 5 = 35, we know that 70 × 5 = 350. Complete the fact families for each calculation.

7 × 5 = 35	3 × 4 = 12	6 × 8 = 48	64 ÷ 8 = 8
70 × 5 = 350	30 × 4 = __	_ × 8 = 480	640 ÷ 8 = __
5 × 70 = 350	__ × __ = __	__ × __ = __	__ ÷ __ = __
50 × 7 = 350	__ × __ = __	__ × __ = __	__ × __ = __
7 × 50 = 350	__ × __ = __	__ × __ = __	__ × __ = __
350 ÷ 50 = 7	__ ÷ __ = __	__ ÷ __ = __	
350 ÷ 7 = 50	__ ÷ __ = __	__ ÷ __ = __	
350 ÷ 5 = 70	__ ÷ __ = __	__ ÷ __ = __	
350 ÷ 70 = 5	__ ÷ __ = __	__ ÷ __ = __	

2)



There are _____ columns of _____ boxes.

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Each box contains ten tennis balls.

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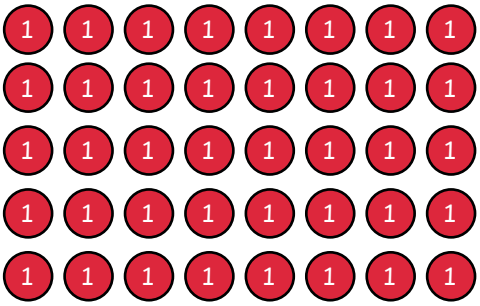
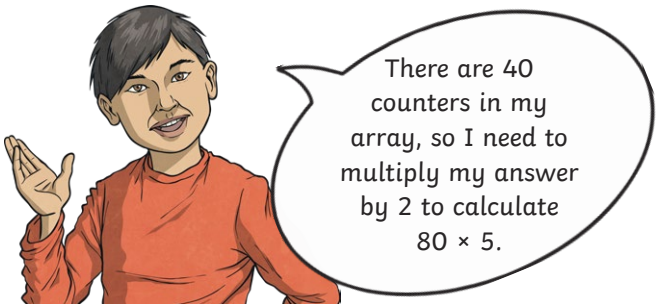
50 × 7 = 350	__ × __ = __	__ × __ = __	__ × __ = __
7 × 50 = 350	__ × __ = __	__ × __ = __	__ × __ = __
350 ÷ 50 = 7	__ ÷ __ = __	__ ÷ __ = __	
350 ÷ 7 = 50	__ ÷ __ = __	__ ÷ __ = __	
350 ÷ 5 = 70	__ ÷ __ = __	__ ÷ __ = __	
350 ÷ 70 = 5	__ ÷ __ = __	__ ÷ __ = __	

1) Thomas is calculating 80 × 5. He has created this array using place value counters to help him.

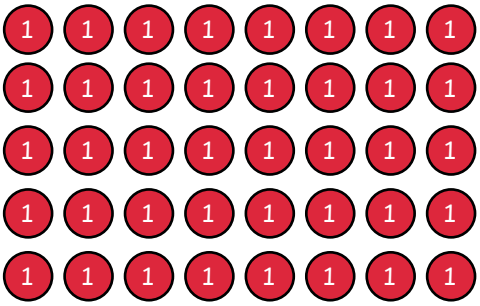


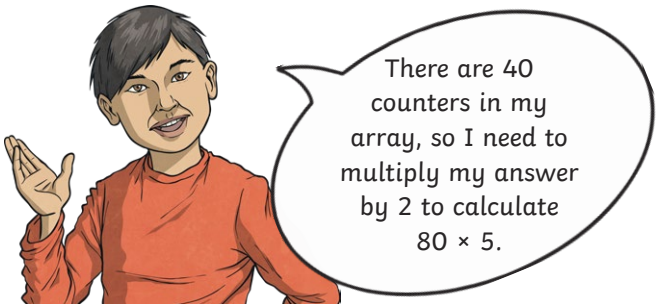


Do you agree? Explain your reasons.

2) Geri says that 80 × 5 will have the same answer as 50 × 8. Do you agree? How could you use arrays and the times table facts you know to prove your answer?

1) Thomas is calculating 80 × 5. He has created this array using place value counters to help him.





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1) Use your times tables knowledge to find two multiplication facts that make each total.

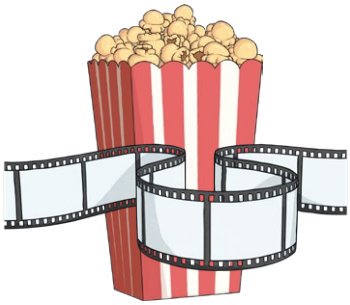
240	**160**	**180**
120	**360**	**720**

2) Ms Patel is booking cinema tickets for a whole-school visit. She wants to choose a screen at the cinema where the 480 pupils on the trip can fill up each row of seats and there won't be any rows with empty spaces.

Screen	A	B	C	D	E	F	G	H
Seats in Each Row	10	12	18	20	35	45	50	60

a) Which of the following screens would be suitable for the trip?

b) To fit all 480 children in, how many rows would Ms Patel need to reserve in each different suitable screen?



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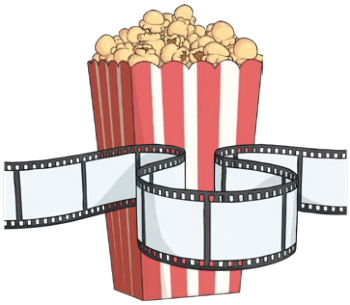

$40 \times 3 =$

$80 \times 4 =$

$80 \times 30 =$

$20 \times 30 =$

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$30 \times 4 =$

$300 \times 70 =$

$90 \times 80 =$

$120 \times 4 =$

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$30 \times 30 =$

$30 \times 100 =$

$10 \times 400 =$

$600 \times 30 =$

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$8 \times 60 =$

$30 \times 110 =$

$11 \times 400 =$

$30 \times 50 =$

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$30 \times 9 =$

$300 \times 30 =$

$50 \times 40 =$

$80 \times 3 =$

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Multiplication Magic Cards **Answers**

Question	Answer
1. 40 × 3 =	
	120
2. 80 × 4 =	
	320
3. 80 × 30 =	
	2400
4. 20 × 30 =	
	600
5. 30 × 4 =	
	120
6. 300 × 70 =	
	21 000
7. 90 × 80 =	
	7200
8. 120 × 4 =	
	480
9. 30 × 30 =	
	900
10. 30 × 100 =	
	3000

11. 10 × 400 =	
	4000
12. 600 × 30 =	
	18 000
13. 8 × 60 =	
	460
14. 30 × 110 =	
	3300
15. 11 × 400 =	
	4400
16. 30 × 50 =	
	1500
17. 30 × 9 =	
	270
18. 300 × 30 =	
	9000
19. 50 × 40 =	
	2000
20. 80 × 3 =	
	240

$40 \times 3 =$

$10 \times 3 =$

$7 \times 30 =$

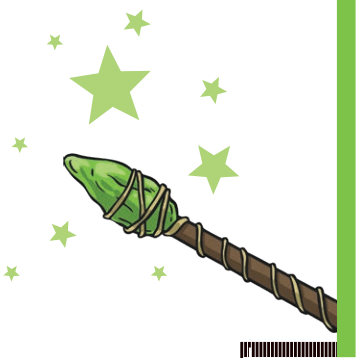
$20 \times 3 =$

$30 \times 4 =$

$3 \times 70 =$

$90 \times 3 =$

$120 \times 3 =$



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$3 \times 80 =$

$3 \times 100 =$

$1 \times 30 =$

$6 \times 30 =$

$3 \times 60 =$

$30 \times 11 =$

$11 \times 3 =$

$3 \times 50 =$

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$30 \times 9 =$

$3 \times 30 =$

$5 \times 30 =$

$80 \times 3 =$

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Multiplication Magic Cards **Answers**

Question	Answer
1. 40 × 3 =	
	120
2. 10 × 3 =	
	30
3. 7 × 30 =	
	210
4. 20 × 3 =	
	60
5. 30 × 4 =	
	120
6. 3 × 70 =	
	210
7. 90 × 3 =	
	270
8. 120 × 3 =	
	360
9. 3 × 80 =	
	240
10. 3 × 100 =	
	300

11. 1 × 30 =	
	30
12. 6 × 30 =	
	180
13. 3 × 60 =	
	180
14. 30 × 11 =	
	330
15. 11 × 3 =	
	33
16. 3 × 50 =	
	150
17. 30 × 9 =	
	270
18. 3 × 30 =	
	90
19. 5 × 30 =	
	150
20. 80 × 3 =	
	240

$40 \times 3 =$

$80 \times 4 =$

$8 \times 30 =$

$20 \times 3 =$

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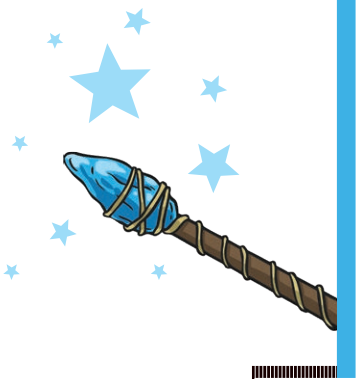
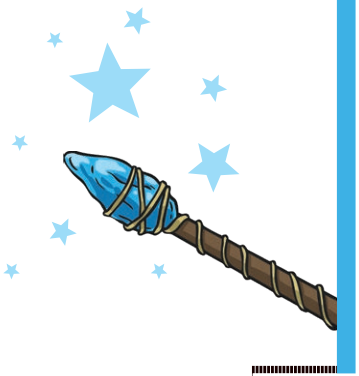
$30 \times 4 =$

$3 \times 70 =$



$90 \times 8 =$



$120 \times 4 =$

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$30 \times 30 =$

$3 \times 100 =$

$1 \times 400 =$

$6 \times 30 =$

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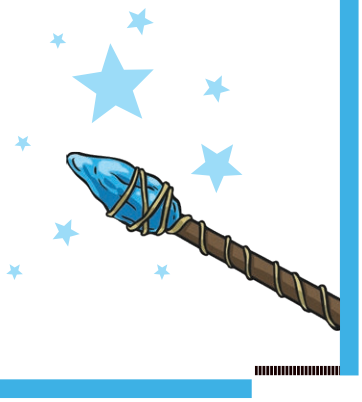
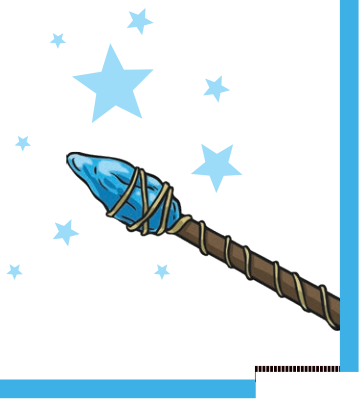
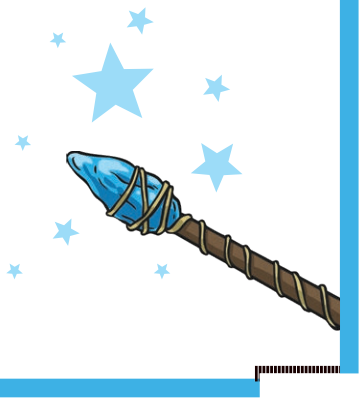
$8 \times 60 =$



$30 \times 11 =$



$11 \times 4 =$



$30 \times 50 =$

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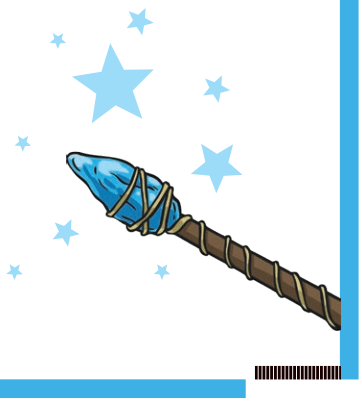
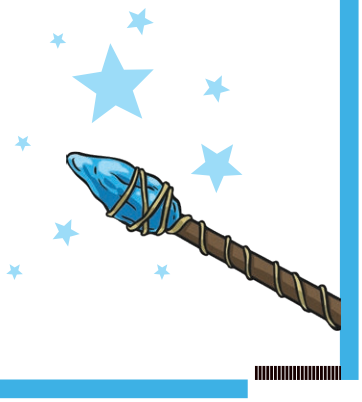
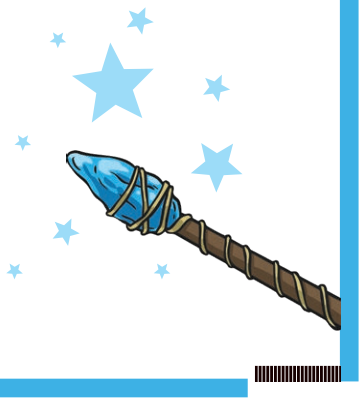
$30 \times 9 =$



$3 \times 30 =$



$5 \times 40 =$



$80 \times 3 =$

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Multiplication Magic Cards **Answers**

Question	Answer
1. 40 × 3 =	
	120
2. 80 × 4 =	
	320
3. 8 × 30 =	
	240
4. 20 × 3 =	
	60
5. 30 × 4 =	
	120
6. 3 × 70 =	
	210
7. 90 × 8 =	
	720
8. 120 × 4 =	
	480
9. 30 × 30 =	
	900
10. 3 × 100 =	
	300

11. 1 × 400 =	
	400
12. 6 × 30 =	
	180
13. 8 × 60 =	
	480
14. 30 × 11 =	
	330
15. 11 × 4 =	
	44
16. 30 × 50 =	
	1500
17. 30 × 9 =	
	270
18. 3 × 30 =	
	90
19. 5 × 40 =	
	200
20. 80 × 3 =	
	240

Multiplication Square

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

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