St Gerard's Times Tables Challenge

Gold

Name_____

Dear St Gerard's mathematician,

You are working on Gold times tables, which are the 8, 9, 12 and the sneaky 15 times tables. It is very important that you practise these as often as you can to improve your speed and accuracy.

Each week, you will be tested on these.

How quickly can you answer 48 times tables questions?

Tips to help you learn your times tables:

- **Chant each times table out loud: 'four times two is eight'**
- **Make a rhyme**
- **Can you do it backwards, starting with 12 x ?**
- **Ask someone to test you in a random order**
- **Can you find some songs which include the tables?**
- **Use your body/fingers/toes to help you count in different steps**
- **Play against the clock – can you beat your time?**
- **Make it fun!**

Once you have achieved your Bronze award you are able to try for your Silver Award.

Useful websites:

http://www.ictgames.com/resources.html

http://www.fun4thebrain.com/

http://www.topmarks.co.uk/maths-games/7-11-years/problem-solving

https://mathsframe.co.uk/

http://mathszone.co.uk/

Useful apps:

King of Maths

Maths Shake

Maths Duel

Battle Times

Squeebles

8 Times Table

1 x 8 = 8	5 x 8 = 40	9 x 8 = 72
2 x 8 = 16	6 x 8 = 48	10 x 8 = 80
3 x 8 = 24	7 x 8 = 56	11 x 8 = 88
4 x 8 = 32	8 x 8 = 64	12 x 8 = 96

Top Tip:

8× all of the numbers in the 8 times tables are even.

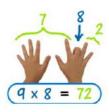Can you spot the pattern? The ones digits go down in 2s (8, 6, 4, 2, 0)

9 Times Table

1 x 9 = 9	5 x 9 = 45	9 x 9 = 81
2 x 9 = 18	6 x 9 = 54	10 x 9 = 90
3 x 9 = 27	7 x 9 = 63	11 x 9 = 99
4 x 9 = 36	8 x 9 = 72	12 x 9 = 108

Top Tip:

9× has a pattern: **9, 18, 27, 36, 45, 54, 63, 72, 81, 90**

Notice how the 'ones' go down: 9,8,7,6, ...? And the 'tens' go up: 1,2,3,...?
Your hands can help! Example: to multiply 9 by 8: hold your 8th finger down, and you can count "7" and "2" ... the answer is 72.

9 x 8 = 72

12 Times Table

1 x 12 = 12	5 x 12 = 60	9 x 12 = 108
2 x 12 = 24	6 x 12 = 72	10 x 12 = 120
3 x 12 = 36	7 x 12 = 84	11 x 12 = 132
4 x 12 = 48	8 x 12 = 96	12 x 12 = 144

Top Tip:

12× Note that 12 is 10 + 2, so 12 x *something* is 10 x *something* + 2 x *something*.

Example: 4 x 12 =

10 x 4 = **40** + 2 x 4 = **8**

40 + 8 = **48**

Super Sneaky 15 Times Tables Challenge

1 x 15 = 15	5 x 15 = 75	9 x 15 = 135
2 x 15 = 30	6 x 15 = 90	10 x 15 = 150
3 x 15 = 45	7 x 15 = 105	11 x 15 = 165
4 x 15 = 60	8 x 15 = 120	12 x 15 = 180

Top Tip:

15x Numbers in the 15 times tables will always end in a 5 or a 0.

Note that 15 is 10 + 5, so 15 x *something* is 10 x *something* + 5 x *something*.

Example: 6 x 15 =

10 x 6 = **60** + 5 x 6 = **30**

60 + 30 = **90**

Can you complete this challenge in less than 5 minutes?

X	8	9	12	15
5				
7				
10				
3				
2				
1				
12				
11				
9				
4				
6				
8				

Now we will look at DIVISION. This is the inverse operation to MULTIPLICATION. You can use your skills to answer these questions.

Dividing by 8

Half your number three times. So in example 1, you need to divide 128 by 8. So half of 128 is 64, half of 64 is 32 and half of 32 is 16.

8 ÷ 8 = 1	40 ÷ 8 = 5	72 ÷ 8 = 9
16 ÷ 8 = 2	48 ÷ 8 = 6	80 ÷ 8 = 10
24 ÷ 8 = 3	56 ÷ 8 = 7	88 ÷ 8 = 11
32 ÷ 8 = 4	64 ÷ 8 = 8	96 ÷ 8 = 12

Dividing by 9

Similar to the divide by 3 rule, if the sum of all the digits is divisible by 9, then the entire number is divisible by 9. For example, we know that 18332145 is divisible by 9 because 1+8+3+3+2+1+4+5 = 27 and 27 ÷ 9 = 3.

9 ÷ 9 = 1	45 ÷ 9 = 5	81 ÷ 9 = 9
18 ÷ 9 = 2	54 ÷ 9 = 6	90 ÷ 9 = 10
27 ÷ 9 = 3	63 ÷ 9 = 7	99 ÷ 9 = 11
36 ÷ 9 = 4	72 ÷ 9 = 8	108 ÷ 9 = 12

Dividing by 12

A number is divisible by 12 if it is divisible by 3 and by 4.

12 ÷ 12 = 1	60 ÷ 12 = 5	108 ÷ 12 = 9
24 ÷ 12 = 2	72 ÷ 12 = 6	120 ÷ 12 = 10
36 ÷ 12 = 3	84 ÷ 12 = 7	132 ÷ 12 = 11
48 ÷ 12 = 4	96 ÷ 12 = 8	144 ÷ 12 = 12

Gold Division Challenge

12 ÷ 12 =	90 ÷ 9 =	108 ÷ 12 =
18 ÷ 9 =	36 ÷ 12 =	9 ÷ 9 =
64 ÷ 8 =	54 ÷ 9 =	32 ÷ 8 =
48 ÷ 12 =	99 ÷ 9 =	72 ÷ 9 =
8 ÷ 8 =	84 ÷ 12 =	40 ÷ 8 =
96 ÷ 8 =	48 ÷ 8 =	132 ÷ 12 =
120 ÷ 12 =	16 ÷ 8 =	63 ÷ 9 =
45 ÷ 9 =	60 ÷ 12 =	72 ÷ 8 =
80 ÷ 8 =	108 ÷ 9 =	72 ÷ 12 =
24 ÷ 12 =	56 ÷ 8 =	27 ÷ 9 =
81 ÷ 9 =	96 ÷ 12 =	24 ÷ 8 =
36 ÷ 9 =	88 ÷ 8 =	144 ÷ 12 =