Number Creation - The five 5s

PURPOSE / SKILL: To build number fluency and flexibility. To problem solve using all the possible operations with numbers. Practice using operations with whole numbers; explore using order of operations.   To engage in math conversation.

MATERIALS: Recording sheet, extra Paper/ or erasable surface, pencil, access to calculator to check answers.   Work together with another person! It is more fun if you can work as a team.

INSTRUCTIONS:

- Using five 5s, try to find/create all the numbers from 1 to 20. You can use any operations, but you must always use all five of the 5s.
- List all the possible operations that can be used (additions, subtraction, multiplication, division, - *some might add square root, fractions or exponents*)
- Record as many solutions as you can for each number.
- Discuss/Debrief: which numbers were the easiest to find/create?   Which numbers were you unable to create, why might that be?   How might following the "order of operations – BEDMAS change this activity?
- **SEE THE EXAMPLE USING 4's ON THE NEXT PAGE**

ACTIVITY: Recording sheet below for solutions

1.	2.	3.	4.	5
6.	7.	8.	9.	10
11.	12.	13.	14.	15.
16.	17.	18.	19.	20.

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POSSIBLE NEXT STEPS:

- Extend to number beyond 20 … can you find the numbers up to 50? 100?
- Try this again using four 4s.
- Make a number challenge of your own that is similar to this one.
- Can you use four 4s to make negative numbers?
- Ask what patterns do you notice?

ADD IMAGE OF PROCESS – *using four 4s.*

1. **(4+4-4)÷4 = 1**	**2.**	**3.**	**4.**	**5.**
6.	**7.**	**8.** **4+4+4-4 = 8**	**9 .** $\frac{4}{4} + 4 + 4 = 9$	**10**
11.	**12.**	**13.**	**14.**	**15.** **44 ÷4 + 4 = 15**
16. **4+4+4+4 = 16**	**17.** $\frac{4}{4} + 4x\ 4 = 17$	**18.**	**19.**	**20.** $\left(\frac{4}{4} + 4\right) x\ 4$ $= 20$