

Four Fours

How many numbers between 1 and 20 can you make using four 4s? Can you make all 20?

For example: $16 = 4 + 4 + 4 + 4$ (four 4s)

There will be more than 1 way to get the answer...

$$1 = 4 \div 4 + 4 - 4$$

$$2 = (4 \div 4) + (4 \div 4)$$

$$3 = (4 + 4 + 4) \div 4$$

$$4 = (4 - 4) \times 4 + 4$$

$$5 = (4 \times 4 + 4) \div 4$$

$$6 = (4 + 4) \div 4 + 4$$

$$7 = 4 - (4 \div 4) + 4$$

$$8 = 4 + 4 + 4 - 4$$

$$9 = 4 \div 4 + 4 + 4$$

$$10 = 4 \times 4 - 4 - \sqrt{4}$$

$$11 = \sqrt{4} \times (4! - \sqrt{4}) \div 4$$

$$12 = 4 \times (4 - (4 \div 4))$$

$$13 = (4! \times \sqrt{4} + 4) \div 4$$

$$14 = 4 + 4 + 4 + \sqrt{4}$$

$$15 = 4 \times 4 - 4 \div 4$$

$$16 = 4 + 4 + 4 + 4$$

$$17 = 4 \times 4 + 4 \div 4$$

$$18 = 4 \times 4 + 4 - \sqrt{4}$$

$$19 = 4! - 4 - (4 \div 4)$$

$$20 = 4 \times ((4 \div 4) + 4)$$

$$* \sqrt{4} = 2$$

$$* 4! = 4 \times 3 \times 2 \times 1 = 24$$