Activity: Five 2s

Example 1: Use five threes to make the number 20.

Solution:

$$33 \div 3 + 3 \cdot 3 = 11 + 9 = 20$$

Example 2: Use five threes to make the number 3.

Solution:

$$3 + 3 - 3 - 3 + 3 = 3$$

Problem: Use five twos to make expressions resulting in numbers from 0 to 26. The digit 2 must be written five times in each expression. You cannot use any other digits. You can use the following operators: $+$, $-$, $\cdot$, $\div$, exponents, and brackets.

Note: Some of the numbers have multiple solutions. All of the numbers except 13 and 26 can be made without using brackets. The number 17 requires use of exponents.

$0 =$

$1 =$

$2 =$

$3 =$

$4 =$

$5 =$

$6 =$

$7 =$

$8 =$

$9 =$

$10 =$

$11 =$

$12 =$

$13 =$

$14 =$

$15 =$

$16 =$

$17 =$

$18 =$

$19 =$

$20 =$

$21 =$

$22 =$

$23 =$

$24 =$

$25 =$

$26 =$

What other numbers could you make out of five twos?

What is the largest number you can make using five twos?