

WORKSHOP 3/2020

Worksheet 1

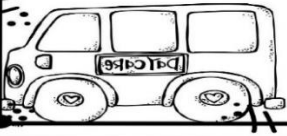
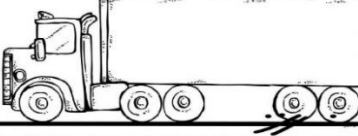

Algebra Puzzle: Grade 5

In this exercise, you must use the order of operations to get to the target number in the square. You can go vertically, horizontally or diagonally, using each number only once. How many different ways can you find?

- Let us have some fun with this number game.
- There are 3 rows and 3 columns with a number in each block.
- You can use the four basic mathematics operations horizontally/ vertically/ diagonally to get the TARGET NUMBER 20.
- See how fast you can solve it.
- Write down all the options that you used, even the ones that do not have the target 20.

1	6	8
9	3	4
2	5	7

Target #: 20

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Algebra Puzzle: Grade 5 – Solution

HORIZONTALLY

$$1 + 6 + 8 = 15$$

$$(8 - 6) + 1 = 7 + 1 = 8$$

$$8 - (6 + 1) = 8 - 7 = 1$$

$$(1 \times 6) + 8 = 6 + 8 = 14$$

$$(8 - 1) + 6 = 7 + 6 = 13$$

$$9 + 3 + 4 = 16 \quad (9 - 3) \times 4 = 6 \times 4 = 24$$

$$9 - (3 + 4) = 9 - 7 = 2$$

$$(9 \times 4) \div 3 = 36 \div 3 = 12$$

$$2 + 5 + 7 = 14$$

$$(2 + 5) - 7 = 7 - 7 = 0$$

$$(2 \times 5) + 7 = 10 + 7 = 17$$

$$2 \times (7 + 5) = 2 \times 12 = 24$$

VERTICALLY

$$1 + 9 + 2 = 12$$

$$\underline{\underline{(1 + 9) \times 2 = 10 \times 2 = 20}}$$

$$(9 - 1) \times 2 = 8 \times 2 = 16$$

$$(2 \times 9) + 1 = 18 + 1 = 19$$

$$(6 \times 5) - 3 = 30 - 3 = 27$$

$$6 + (5 \times 3) = 6 + 15 = 21$$

$$(5 - 3) \times 6 = 2 \times 6 = 12$$

$$5 + (6 \times 3) = 5 + 18 = 23$$

$$(8 \div 4) \times 7 = 2 \times 7 = 14$$

$$8 + 7 + 4 = 19$$

$$(7 - 4) \times 8 = 3 \times 8 = 24$$

$$\underline{\underline{(7 \times 4) - 8 = 28 - 8 = 20}}$$

DIAGONALLY

$$\underline{\underline{(7 \times 3) - 1 = 21 - 1 = 20}}$$

$$(7 - 1) \times 3 = 6 \times 3 = 18$$

$$3 + (7 \times 3) = 3 + 21 = 24$$

$$7 \times (3 \times 1) = 7 \times 3 = 21$$

$$(8 \times 2) + 3 = 16 + 3 = 19$$

$$3 + (8 \div 2) \times 3 = 4 \times 3 = 12$$

$$(8 \times 3) - 2 = 24 - 2 = 22$$

$$(8 - 2) \times 3 = 6 \times 3 = 18$$

Source: _Free Maths games

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