Tic-Tac-Toe Sums

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
13	14	15	16	17	18
4	19	5	20	6	21

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

Rules for Tic-Tac-Toe Sums

2 Players

- Player 1 and Player 2 each select a number between 1 and 9 at the bottom of the page and then each places one of their markers under that number.
- Player 1 then moves one of the two markers to a new number.
- Player 1 then places a marker on the grid covering the sum of the two numbers.
- Player 2 then moves *only* one marker to make a new sum and then places their marker on that sum on the grid.
  - The markers *can* both be placed under the same number. For example 6 + 6 = 12 is allowed.
- Players alternate moving one marker at a time and continue placing their markers on the grid until a player has marked four sums in a row.
- Rows can be horizontal, vertical or diagonal.
- After the game players should discuss their strategies.

How Close to 100?

1. _____ x _____ = _____   6. _____ x _____ = _____

2. _____ x _____ = _____   7. _____ x _____ = _____

3. _____ x _____ = _____   8. _____ x _____ = _____

4. _____ x _____ = _____   9. _____ x _____ = _____

5. _____ x _____ = _____   10. _____ x _____ = _____

Rules for How Close to 100

- This game is played in partners. Two children share a blank 100 grid.

- The first partner rolls two number dice.

- The numbers that come up are the numbers the child uses to make an array on the 100 grid.

- They can put the array anywhere on the grid, but the goal is to fill up the grid to get it as full as possible.

- After the player draws the array on the grid, she writes in the number sentence that describes the grid.

- The second player then rolls the dice, draws the number grid and records their number sentence.

- The game ends when both players have rolled the dice and cannot put any more arrays on the grid.

- How close to 100 can you get?

Variation

Each child can have their own number grid. Play moves forward to see who can get closest to 100.

Fill in the squares so the sums are correct on the right side and on the bottom. The first one has been done for you.

Puzzle 1 (completed example):

2	2	4
0	1	1
2	3	

Puzzle 2:

		4
		1
3	2	

Puzzle 3:

		5
		3
5	3	

Puzzle 4:

		6
		2
1	7	

Start the maze with zero.

You have to finish the maze with a total of 100.

Your route can go **right** or **down** at each turn.

There are 3 possible routes. Can you find them?

START	14	7	13	15
12	9	11	26	21
16	5	12	19	10
13	10	17	24	11
8	20	4	15	FINISH

$$\text{🕹️} + \text{🕹️} = 10$$

$$\text{🐸} \times \text{🏰} = 81$$

$$\text{🎮} + \text{🎮} = 5$$

$$\text{🧚} + \text{🐸} = 25$$

$$\text{🕹️} + \text{🎮} = 7$$

$$\text{🐸} = \text{🏰}$$

$$\text{🧚} - \text{👑} = 6$$

$$\text{🕹️} + \text{🎮} + \text{🎮} = \text{?}$$

$$\text{🐸} \times \text{👑} = \text{?}$$

Directions: Use your math skills to find the value of each icon and the '?' in the puzzle below.

$$\text{🤹} \times \text{🦖} = 70$$

$$\text{🤹} - \text{🦖} = 3$$

$$\text{🦖} + \text{🐵} = 12$$

$$\text{🐵} \times \text{👓} = 30$$

$$\text{👓} \times \text{🦖} = \text{❓}$$

Draw lines of 3 numbers that add together to make 10.

The lines can be horizontal, vertical or diagonal.

7	2	4	5	1
3	5	1	6	3
0	3	7	4	5
4	1	5	0	2
6	2	9	1	3

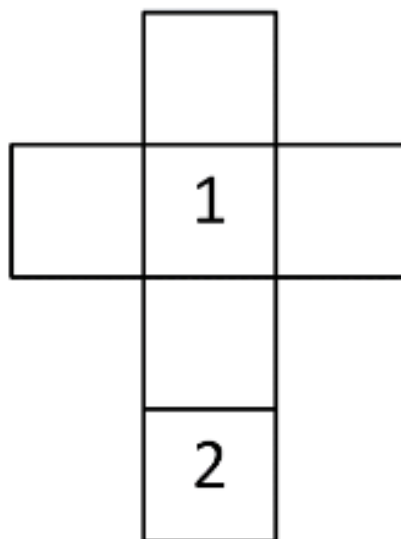*There are 9 different totals of 10 to find - how many can you spot?*

What is the highest total of 3 numbers in a line you can find? _____

What is the lowest total of 3 numbers in a line you can find? _____

1) Write the numbers 3, 4, 5 and 6 in the correct place so that each line of the cross adds up to 11.
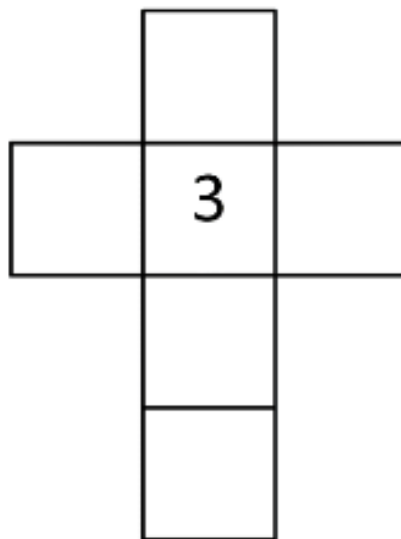
3   4   5   6

Total must be 11

	1	
	2	

2) Write the numbers 1, 2, 4, 5 and 6 in the squares so that each line of the cross adds up to 12.

1   2   4   5   6

Total must be 12

	3	

You have a calculator, but it is broken!

Unfortunately, none of the buttons work apart from the 2, 5, +, - and = button.

Can you help the Captain make all the numbers from 1 to 20 using his broken calculator?

Two of the answers have been filled in for you.

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