Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

This is your maths pack for the week commencing 20.04.20. I have tried to put as much help on it as possible. If you have any problems, please phone either the school or email: mgater@suttonhouse.org.uk me and I will call you and try to guide you through.

**Order of operations**

**Remember your BIDMAS rules:**

Brackets

Indices (squares and cubes etc)

Division

Multiplication

Addition

Subtraction

|  |
| --- |
| Example 1: work out 12 – 3 x 3 + 8 = |
| 1 | This calculation involves subtraction, multiplication and division |
| 2 | BIDMAS tells us that the multiplication needs to be done first | 3 x 3 = 912 – 9 + 8 |
| 3 | Working from the left to right, subtraction needs to be done next | 12 – 9 = 3 |
| 4 | Finally, do the addition | 3 + 8 = 11 |

|  |
| --- |
| Example 2: work out 7 x (10 – 4) + 11 = |
| 1 | This calculation involves multiplication, brackets, subtraction, and addition |
| 2 | BIDMAS tells us that the things inside the brackets must be done first | (10 – 4) = 67 x 6 + 11 |
| 3 | The two operations left are the multiplication and addition. The multiplication needs to be done next | 7 x 6 = 42 |
| 4 | Finally, do the addition | 42 + 11 = 53 |

**Your turn**

Use BIDMAS to answer these questions:

|  |  |  |
| --- | --- | --- |
| 8 + 3 x 11 = | 25 ÷ 5 – 2 = | 4 + 1 x 5 = |
| (12 – 6) x 7 = | 10 x (22 – 12) = | 77 ÷ (30 -23) = |
| 8 x (12 – 5) = | 50 – 4 x 4 = | (6 + 6) x 4 = |
| 5 x 5 – 16 ÷ 2 = | 22 – 3 x 2 + 8 = | 80 ÷ 4 – 2 x 6 = |
| 12 x (12 – 9) ÷ 9 = | (16 – 3) + 8 ÷ 2 = | (4 + 6) x 4 + 32 = |
| 9 x (16 -6) ÷ 3 = | 8 x 9 – (12 + 24) | (22 + 22) – 63 ÷ 9 = |

**Add in brackets to make the calculation correct**

|  |
| --- |
| Example 1: Add brackets to the following calculation so it is correct when worked out using BIDMAS: 18 – 3 x 5 = 75 |
| 1 | There are two possible places for brackets to go | 18 – (3 x 5) = (18 – 3) x 5 =  |
| 2 | Solve each one to see which give you the correct answer | 18 – (3 x 5) = 3(18 – 3) x 5 = 75 |
| 3 | So we know the brackets should be here as in the second one | (18 – 3) x 5 = 75 |

**Your turn**

Put the brackets in the correct position to make the calculation correct:

|  |  |  |
| --- | --- | --- |
| 16 ÷ 8 x 2 = 1 | 60 ÷ 5 + 5 = 6 | 8 – 6 x 12 = 24 |
| 88 + 55 ÷11 = 13 | 60 + 10 ÷ 7 = 10 | 42 + 3 ÷ 9 = 5 |
| 3 + 5 x 6 – 2 = 23 | 8 – 2 x 4 + 8 = 32 | 15 – 12 x 3 x 12 = 108 |

**Checking answers:**

**Remember your inverse (opposite) functions**

|  |  |
| --- | --- |
| **Function** | **Inverse function** |
| + | - |
| - | + |
| x | ÷ |
| ÷ | x |

|  |
| --- |
| Example 1: What calculation could you do to check that 10 ÷ 2 = 5? |
| 1 | Firstly identify what sort of calculation the question is. This is division | 10 ÷ 2 = 5 |
| 2 | Multiplication is the opposite of division. If you multiply your answer by the number you divide by you should end up with the number you started with. | 5 x 2 = 10 |

**Your turn**

Write a calculation to check the following:

|  |  |  |
| --- | --- | --- |
| 19 + 8 = 27 | 6 + 11 = 17 | 15 + 19 = 34 |
| 22 – 17 = 5 | 42 – 22 = 20 | 39 – 10 = 29 |
|  5 x 5 = 25 | 7 x 3 = 21 | 7 x 11 = 77 |
| 42 ÷ 6 = 7 | 72 ÷ 8 = 9 | 96 ÷ 8 = 12 |

**Estimating Answers by Rounding**

You can estimate the answer to a calculation by rounding numbers in the calculation to numbers that are easier to use – usually by rounding to the nearest 10 or 100. Even though the answer isn’t exactly right it can still be useful.

|  |
| --- |
| Example 1: Use rounding to estimate the answer to 37 x 11 = |
| 1 | Round both numbers to the nearest 10 | 37 rounds to 4011 rounds to 10  |
| 2 | Rewrite the calculation using the rounded numbers | So estimate 37 x 11 using40 x 10 = 400 |

|  |
| --- |
| Example 2: Use rounding to estimate the answer to 516 ÷ 46 = |
| 1 | Round 516 to the nearest 100Round 46 to the nearest 10  | 516 rounds to 50046 rounds to 50 |
| 2 | Rewrite the calculation using the rounded numbers | So estimate 37 x 11 using500 ÷ 50 = 10 |

**Your turn**

Use rounding to estimate the answers to each of these calculations:

|  |  |  |
| --- | --- | --- |
| 425 + 873 | 185 + 37 | 629 - 172 |
| 834 - 206 | 37 x 12 | 67 x 13 |
| 243 x 9 | 97 ÷ 12 | 62 ÷ 23 |
| 826 ÷ 43 | 705 ÷ 98 | 1049 ÷ 123 |

**This pack should be completed and returned for marking by 4th May 2020**