

ESSENTIAL MATHEMATICS 1

WEEK 2 NOTES AND EXERCISES

PART 1

1. Complete the following calculations using the correct order of operations (BODMAS). (Do the calculations first manually and then check your answers on a calculator.)

$$34 - (2 \times 5) = \underline{\quad}$$

$$(6 + 3) \times 3 = \underline{\quad}$$

$$7 \times (5 + 8) = \underline{\quad}$$

$$58 - (2 \times 4) = \underline{\quad}$$

$$(2 + 6) \times 6 = \underline{\quad}$$

$$(9 + 7) \times 5 = \underline{\quad}$$

$$(4 + 3) \times 2 = \underline{\quad}$$

$$13 - (2 \times 3) = \underline{\quad}$$

$$8 \times (4 + 6) = \underline{\quad}$$

$$(2 + 3) \times 4 = \underline{\quad}$$

$$42 - (2 \times 4) = \underline{\quad}$$

$$50 - (2 \times 8) = \underline{\quad}$$

$$(4 + 1) \times 1 = \underline{\quad}$$

$$97 - (2 \times 5) = \underline{\quad}$$

$$48 - (2 \times 8) = \underline{\quad}$$

$$1 \times (7 + 5) = \underline{\quad}$$

2. Complete the following calculations using the correct order of operations (BEDMAS)

$$94 - 9^2 = \underline{\quad}$$

$$26 - 1^2 = \underline{\quad}$$

$$26 - 7^2 = \underline{\quad}$$

$$28 - 8^2 = \underline{\quad}$$

$$2^2 + 2 = \underline{\quad}$$

$$7^2 + 4^2 = \underline{\quad}$$

$$28 - 4^2 = \underline{\quad}$$

$$8^2 + 4 = \underline{\quad}$$

$$96 - 2^2 = \underline{\quad}$$

$$25 - 2^2 = \underline{\quad}$$

$$9^2 + 3 = \underline{\quad}$$

$$5^2 + 5 = \underline{\quad}$$

$$8^2 + 8^2 = \underline{\quad}$$

$$98 - 4^2 = \underline{\quad}$$

$$28 - 3^3 = \underline{\quad}$$

$$96 - 6^2 = \underline{\quad}$$

3. Complete the following calculations using the correct order of operations (BEDMAS/BODMAS)

$$2 \times (9^2 + 1) = \underline{\hspace{2cm}}$$

$$7 \times 4 + 69 = \underline{\hspace{2cm}}$$

$$79 + (4 \times 4) \div 2 = \underline{\hspace{2cm}}$$

$$7 \times 5 + 71 = \underline{\hspace{2cm}}$$

$$7 \times 9^2 + 45 = \underline{\hspace{2cm}}$$

$$5 \times 4 + 27 = \underline{\hspace{2cm}}$$

$$9 \times 2^2 + 27 = \underline{\hspace{2cm}}$$

$$8 \times (7^2 - 5) = \underline{\hspace{2cm}}$$

$$4 \times (6^2 - 9) = \underline{\hspace{2cm}}$$

$$88 - 1^2 + 1 = \underline{\hspace{2cm}}$$

$$8 \times (4^2 + 2) = \underline{\hspace{2cm}}$$

$$4 \times 9 + 98 = \underline{\hspace{2cm}}$$

$$8 \times (6^2 + 6) = \underline{\hspace{2cm}}$$

$$3 \times 9^2 + 94 = \underline{\hspace{2cm}}$$

$$3 \times 4 + 78 = \underline{\hspace{2cm}}$$

$$3 \times 8 + 18 = \underline{\hspace{2cm}}$$

What does BEDMAS/ BODMAS stand for? Explain what this means.

PART 2

FROBENIUS NUMBERS – otherwise known as McNugget Numbers!

Watch this movie - <http://youtu.be/vNTSugyS038>

Now, answer this question....

If MacDonald's nuggets came in the following pack options, 3, 6, 10 and 18 what size nuggets could we not make (just like they investigated in the movie).

List the numbers from 1 to 42. Next to the numbers that work list the combinations that make it work. This leaves the numbers of the nuggets that do not work.

Number		Number	
1		22	
2		23	
3		24	
4		25	
5		26	
6	2 x 3, 1 x 6	27	
7		28	
8		29	
9		30	
10		31	
11		32	
12		33	
13		34	
14		35	
15		36	
16		37	
17		38	
18		39	
19		40	
20		41	
21		42	

Week 2

Portfolio Task/Investigation

Name:

Watch this movie:

<http://youtu.be/D6tININluuY>

This movie focusses on the number 42.

Answer the following questions.

a) What is the relationship between a piece of A4 paper and the moon? What is the problem with this connection (think of actually doing this)?

b) They also mention in this movie about how the number 42 comes up everywhere, but really all numbers come up everywhere. Think about your week so far – what numbers have you seen already? In what context did you see these numbers? List at least 3 examples....