

Maths

Week Three

BIDMAS: Brackets, Indices (power of etc), divide, Multiply,
Addition , Subtraction

Session 1

$3 + 3 \times 4 = \quad 20 - 6 \times 2 = \quad 6 \times 6 + 4 = \quad 48 - 12 \div 4 =$

$**6 + 4 \times 2 = \quad 4 + 4 \div 2 = \quad 8 + 6 - 3 = \quad 5 + 5 \times 4 =**$

$12 + 3 \times 2 = \quad 2 \times 4 + 5 =$

$1. 100 - (20 \times 3) =$

$9. (5 \times 7) - (2 \times 5) =$

$2. (35 - 15) + (27 - 7) =$

$10. 56 - (4 \times 7) =$

$3. 15 + (6 \times 6) =$

$11. 78 - (10 \times 7) =$

$4. (4 + 5) \times (3 + 6) =$

$12. (7 \times 7) + (4 \times 8) =$

$5. (5 + 5) \times (5 - 2) =$

$13. (45 - 23) + (5 \times 8) =$

$6. 50 - (6 \times 6) =$

$14. 38 - (5 \times 7) =$

$7. (4 + 8) \times (3 - 2) =$

$15. (100 - 45) + (7 \times 7) =$

$8. (9 - 3) + (6 \times 6) =$

$16. 45 - (9 \times 4) =$

Step 2

Write the following sums out without changing the order of the numbers. To make the sums correct put in the brackets if necessary to show which part has to be completed first.

$$8 + 4 \times 6 - 5 = 27$$

$$8 + 4 \times 6 - 5 = 12$$

$$8 + 4 \times 6 - 5 = 67$$

Put in the signs and/or brackets to make the following true:

1. $4 \ 4 \ 3 = 16$

6. $4 \ 6 \ 4 = 20$

2. $7 \ 6 \ 11 = 12$

7. $10 \ 3 \ 5 = 35$

3. $2 \ 2 \ 4 = 8$

8. $2 \ 4 \ 6 = 1$

4. $2 \ 2 \ 4 = 16$

9. $24 \ 2 \ 4 = 8$

5. $4 \ 3 \ 3 = 13$

10. $5 \ 4 \ 4 = 21$

Put the correct sign into the statements below. You will have to work out the sums first, remembering BODMAS

1. $6 + 4 \times 3$ $3 \times 4 + 6$

2. $8 \times 8 - 20$ $6 \times 6 + 20$

3. $2 \times 32 + 46$ $62 + 4 \times 9$

4. $8 + 8 \times 6$ $6 + 8 \times 8$

5. $120 - 6 \times 7$ $6 \times 7 + 40$

6. $140 + 4 \times 7$ $32 \times 5 + 5$

Investigate: Using only these numbers and signs make a statement or expression which will give you the biggest possible answer:

$8 + 7 - 6 \times 4$ and one set of brackets.

Session 2

Two bracket problems

A.

1. $(5 \times 2) + (4 \times 7) =$

2. $(2 \times 9) - (3 \times 4) =$

3. $(5 \times 8) - (7 \times 0) =$

4. $(4 \times 9) + (6 \times 4)$

5. $(3 \times 7) + (5 \times 5) =$

B.

1. $(4 + 3) \times (6 + 2) =$

2. $(7 + 1) \times (6 - 2) =$

3. $(9 + 9) \times (8 + 2) =$

4. $(6 - 3) \times (11 - 4) =$

5. $(12 - 6) \times (5 + 2) =$

C.

1. $(7 \times 6) + (30 \times 4) =$

2. $(20 \times 2) + (5 \times 5)$

3. $(40 \times 2) - (6 \times 3) =$

4. $(100 \times 5) - (30 \times 3) =$

5. $(60 \times 4) + (40 \times 8) =$

6. $(50 \times 5) - (30 \times 2) =$

7. $(70 \times 6) - (4 \times 20) =$

8. $(80 \times 3) + (90 \times 5) =$

9. $(10 \times 1) \times (60 \times 5) =$

10. $(80 \times 4) \times (5 \times 2) =$

What is the missing number?

A.

1. $(5 \times 2) + \square = 13 \square$

2. $(2 \times 9) - \square = 14$

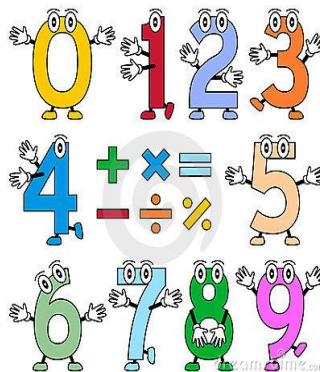
3. $(5 \times \square) + 7 = 47$

4. $(\square \times 9) - 5 = 23$

5. $(\square \times 7) + 9 = 30$



B.



1. $(4 + \square) = (6 + 1)$

2. $(7 + 1) = (\square - 4)$

3. $(\square + 9) = (8 + 10)$

4. $(32 - 3) = (11 + \square)$

5. $(54 - 6) = (5 + \square)$

C.

1. $(7 \times 6) + 3 = (3 \times 4) - \square$

2. $(20 \times \square) - 1 = (5 \times 5) + 14$

3. $77 + (40 \times \square) = (60 \times 3) - 23$

4. $(100 \times 5) - 50 = (30 \times 3) + \square$

5. $42 + (60 \times \square) = (40 \times 8) - 38$

6. $(50 \times 5) + 12 = (30 \times 2) + \square$

7. $(70 \times 6) - \square = (40 \times 7) + 25$

8. $(80 \times 3) + 53 = (90 \times \square) - 67$

9. $(70 \times \square) + 23 = (60 \times 5) - 67$

10. $1000 - (80 \times 4) = (\square \times 8) - 40$

Session 3

$$19 - 6 + 2 = 28 + [\underline{\quad}] - 15$$

$$24 - 10 + 6 = 8 + 7 + [\underline{\quad}]$$

$$12 + 9 + 8 = 40 - [\underline{\quad}] + 9$$

$$5 \times 3 + 10 = 11 + 12 + [\underline{\quad}]$$

$$40 \div 10 - 1 = [\underline{\quad}] - 13 - 4$$

$$7 \times 4 + 2 = 5 \times [\underline{\quad}] - 5$$

$$9 \times 9 + 9 = 10 \times 10 - [\underline{\quad}]$$

$$80 - 42 + 5 = 8 \times [\underline{\quad}] + 3$$

$$48 - 18 - 7 = [\underline{\quad}] \times 3 + 2$$

$$4 \times 5 \times 5 = 33 + [\underline{\quad}] + 32$$

BIDMAS: MATCH IT UP!

Use the order of operations to work out the answers to these calculations.

Match them to the answers of the boxes.

$$11 + 3 \times 2$$

$$6 \times (10 - 2^2)$$

$$20 + 4 + 1$$

$$7 \times 6 - 3 \times 5$$

$$20 - 3^2$$

$$121 + (10 + 1)^2$$

$$3 + 8^2 - 8$$

$$6 \times 6 - 2^2$$

$$16 - 8 + 4$$

$$3^3 + 9 + 2^2 \times 3$$

$$(4 + 3)^2$$

$$(4 - 2) \times (1 + 5^2)$$

Session 4

Algebra

Look at the following questions. I want you to find the answer based on the values of a, b, c, d I give you

$$a=3 \quad b=5 \quad c=2 \quad d=8$$

$a+b=$

$b+d=$

$c+d=$

$d-a=$

$b-a=$

$a-c=$

$4a=$

$5b=$

$2c=$

$ab=$ (remember we don't need the multiplication symbol here)

$cd=$

$ab+cd=$

$bc+ca=$

$d/2=$

$ab/3=$ (it is best in this case to do the multiplication first)

$ad/c=$

$n+5=20$

$2n+10=16$

$n/5=30$

$2n/5=30$

$n^2=25$

$3n-5=20$

$n=12+14$

$2n=4+20$

$n/2=20$

$3n^2=75$

$3n-n=10$

Now I want you to work backwards. I want you to find the value of the letter in each case (n will be different in every case)

$$4n=16$$

1. k , m and n each stand for a whole number. They add together to make 1500

$$k + m + n = 1500$$

m is **three times** as big as n . k is **twice** as big as n . Calculate the numbers k , m and n .

2. Pencils cost x pence and pens cost 5 pence more than pencils.

(i) Write in algebra the cost of 3 pencils?

(ii) What is the cost of a pen?

(iii) What is the total cost of 3 pencils and a pen?

4 A certain box of chocolates contains n chocolates. A shopkeeper removes

3. A certain box of chocolates contains n chocolates. A shopkeeper removes 4 chocolates from each box of chocolates from each box.

(i) How many chocolates are there in each box?

(ii) A boy buys 3 boxes of chocolates. How many chocolates does he buy altogether?

$$4 \quad 5x + 7 = 19 + 3x$$

$$5 \quad 8x + 5 = 2x + 29$$

$$6 \quad 7 + 3x = 17 + x$$

$$7 \quad 6x - 12 = 2x + 20$$

$$8 \quad 4x - 18 = x + 5$$

$$9 \quad 7x - 15 = 4x - 8$$

$$10 \quad 3x - 6 = 17 - 2x$$

$$11 \quad 5x - 1 = 3x$$

$$12 \quad 8x - 6 + 2x = 13 + 5x$$

$$13 \quad 7x - 9 = 3x - 4$$