

TASK 2:

a)  $15 - 7 \times 2$   
 $= 15 - 14$   
 $= 1$

(2)

b)  $7 \times 5 - 12 \div (6 - 4)$   
 $= 35 - 12 \div 2$   
 $= 35 - 6$   
 $= 29$

(3)

c)  $51 - 3[14 - (10 - 6)]$   
 $= 51 - 3[14 - 4]$   
 $= 51 - 3[10]$   
 $= 51 - 30$   
 $= 21$

(3)

d)  $1599 - 10 + 8$   
 $= 1597$

(1)

e)  $(4 + 2) \times (9 - 2 \times 3)$   
 $= 6 \times (9 - 6)$   
 $= 6 \times 3$   
 $= 18$

(3)

f)  $\frac{20 - 4 \times 2}{12 - 24 \div 3}$   
 $= \frac{20 - 8}{12 - 8}$   
 $= \frac{12}{4}$   
 $= 3$

(4)

✓ Equal to signs  
 - none missing  
 ✓ Arrows

(+2)

TASK 3:

a)  $(3 \times 4)^2$   
 $= (3 \times 4)^2$   
 $= 12^2$   
 $= 144$

(2)

b)  $4y^3 - 10y + 11$   
 $= 4(3)^3 - 10(3) + 11$   
 $= 4 \times 27 - 30 + 11$   
 $= 108 - 30 + 11$   
 $= 89$

(3)

c)  $4(3 \times 2)^2$   
 $= 4(3 \times 2)^2$   
 $= 4 \times 36$   
 $= 144$

(3)

d)  $ab + 3a - 5 - a^2$   
 $= (4)(5) + 3(4) - 5 - (4)^2$   
 $= 20 + 12 - 5 - 16$   
 $= 11$

(4)

TASK 4:

a)  $3a + 5a$   
 $= 8a$

(1)

b)  $6b + 12 - 4b + 1$   
 $= 2b + 13$

(2)

c)  $\frac{3ac - 6}{3}$   
 $= 13c - 2$

(2)

d)  $4(3d + 2) + (7d - 35) \div 7$   
 $= 12d + 8 + d - 5$   
 $= 13d + 3$

(4)

e)  $e^6 \times e^5$   
 $= e^{11}$

(1)

f)  $\frac{f^{10}}{f^2}$   
 $= f^8$

(1)

g)  $3g^2h^5 \times 7gh^3$   
 $= 21g^3h^8$

(3)

h)  $6j^2 + 3j - 2j + 7j^2$   
 $= 13j^2 + j$

(2)

i)  $(6k^3)^2 \times 4k^7$   
 $= 36k^6 \times 4k^7$   
 $= 144k^{13}$

(4)

j)  $\frac{3m^9n^3 \times 4m}{6m^2n^4} + (m^2)^4$   
 $= \frac{12m^{10}n^3}{6m^2n^4} + m^8$   
 $= 2m^8 + m^8$   
 $= 3m^8$

(4)

k)  $7pqr - 5qpr$   
 $= 2pqr$

(1)

✓ Sufficient working  
 ✓ Question written down

(+2)

TASK 5:

a)  $a - 12 = 22$

$$a = 34 \checkmark$$

①

b)  $5b = 13$

$$b = \frac{13}{5} \checkmark$$

①

c)  $\frac{2c}{17} = 4$

$$\frac{c}{17} = 2 \checkmark \quad \text{or} \quad c = 68$$

$$c = 34 \checkmark \quad c = 34$$

②

d)  $3d + 4 = 28$

$$3d = 24 \checkmark$$

$$d = 8 \checkmark$$

②

e)  $12e + 3 = 15e - 60$

$$3 = 3e - 60$$

$$63 = 3e$$

$$e = 21 \checkmark$$

③

f)  $4 + 3(2f + 7) + 5f = 7(f - 4) + 9$

$$4 + 6f + 21 + 5f = 7f - 28 + 9$$

$$11f + 25 = 7f - 19$$

$$4f + 25 = -19$$

$$4f = -44 \checkmark$$

$$f = -11 \checkmark$$

⑤

g) Let original number =  $x$

$$4(x + 3) - 2x = 26$$

$$4x + 12 - 2x = 26$$

$$2x + 12 = 26$$

$$2x = 14$$

$$x = 7 \checkmark$$

④

✓ No equal to signs on LHS

✓ Sufficient working

②

TASK 6:

a) i)  $18 \checkmark$

ii)  $21 \checkmark$

iii)  $11 \checkmark$

iv)  $3x + 12 \checkmark$

④

b)  $x6 \checkmark + 24 \checkmark$

OR

$$+4 \quad x6$$

②

TASK 8:

1)  $2 + 3(5^2 + 35) - \frac{20 - 3 \times 2^2}{15 - (8 - (3 - 2))} + (12 \div 4) \times 2 + 7$

$$- 2(45 - (50 - (60 - 50))) - 2(8 - 2)(8 \div 2) - \frac{17^2}{17^6}$$

$$= 2 + 180 - \frac{8}{8} + 6 + 7 - 10 - 120 - 17$$

$$= 47 \checkmark$$

2)  $8(3a + 7) + a(a^2 + 3a - 5) - \frac{16a^2b^3}{8ab^3} + \frac{3 \times a \times 6 - 12 \times 4}{6} - a^3 + (3a)^2 + 12 \left( 3 - \frac{(a^3)^2}{a^2 \cdot a^3} \right) +$

$$a^{100} \div a^{99} + 20 \div 4$$

$$= 24a + 56 + a^3 + 3a^2 - 5a - 2a + 3a - 8$$

$$- a^3 + 9a^2 + 36 - 12a^2 + a + 5$$

$$= 21a + 89 \checkmark$$

3)  $xyz - x^2 + (xy)^2 - 10x + x(3y - 5z) -$

$$\left( \frac{x - \frac{4z}{3}}{3} \right)$$

$$= (7)(4)(2) - 49 + 64 - 70 + 7(12 - 10) -$$

$$\left( \frac{7 - 1}{3} \right)$$

$$= 56 - 49 + 64 - 70 + 14 - 2$$

$$= 13 \checkmark$$

4a)  $b = 1$

b)  $c = 2$

c)  $d = 3$

d)  $e = 5$

e)  $f = 8$

✓ All

④

[120]

# Answer Sheet

Name: MEMO.....

Task 1:

- a)  $5a // + 7 \times b \div (c + 2) // - \frac{8-d}{e \div 2} // + 3[f + 2(g-3)] // - 6^2 //$  (3)  
✓ 1st term  
✓ 2nd term  
✓ ALL
- b) ..... 1 ✓
- c) .....  $\leq 8 \times b^2$  ..... (3)

Task 3e:

$p$	3	6
$q$	2	0
$p + q$	5 ✓	
$6p + 11$	29 ✓	47 ✓
$7(5p - 6q)$	21 ✓	210 ✓
$q^p + 3$	11 ✓	3 ✓

(7)

Task 7:

a)

Figure Number ( $p$ )	Number of blank squares ( $B$ )	Number of crossed squares ( $C$ )	Number of dots ( $D$ )
1	10	2 ✓	17
2	12 ✓	4 ✓	24 ✓
3	14 ✓	6	31 ✓
4	16 ✓	8 ✓	38 ✓
10	28 ✓	20 ✓	80 ✓

(12)



- b)  $B = 2p + 8$
- c)  $C = 2p$
- d)  $D = 7p + 10$
- e)  $B = C + 8$  OR  $C = B - 8$   
 REVERSE ONLY CASE - 1 Mex  
 IF JUST AS  $2p + 8$  etc.



(8)