

**ALGEBRA (Q 2 & 3, PAPER 1)**

**LESSON NO. 6: LITERAL EQUATIONS & SUBSTITUTION**

**2007**

2 (b) (i) Find the value of  $\frac{x+3y+5}{2x+2y}$  when  $x = \frac{5}{2}$  and  $y = \frac{1}{3}$ .

**2006**

3 (a) Find the value of  $\frac{ab-c}{2}$  when  $a = 3$ ,  $b = \frac{2}{3}$  and  $c = 1$ .

**2005**

2 (a) Find the value of  $x^2 - 5xy$  when  $x = 3$  and  $y = -2$ .

3 (a) Given that  $ax + b = c$ , express  $x$  in terms of  $a$ ,  $b$  and  $c$ , where  $a \neq 0$ .

**2004**

2 (a) Find the value of  $3(2p - q)$  when  $p = -4$  and  $q = 5$ .

**2003**

2 (a) Given that  $3x - 2y = 4$ , find the value of  $y$  when  $x = -2$ .

**2002**

2 (c) (i) Express  $b$  in terms of  $a$  and  $c$  where  $\frac{8a-5b}{b} = c$ .

(ii) Hence, or otherwise, evaluate  $b$  when  $a = 2^{\frac{5}{2}}$  and  $c = 3^3$ .

**2001**

3 (a) Given that  $u^2 + 2as = v^2$ , calculate the value of  $a$  when  $u = 10$ ,  $s = 30$  and  $v = 20$ .

**2000**

2 (a) Find the value of  $5x - 3y$  when  $x = \frac{5}{2}$  and  $y = \frac{2}{3}$ .

3 (a) Express  $p$  in terms of  $t$  and  $k$  when  
 $tp - k = 7k$ ,  $t \neq 0$ .

**1999**

- 3 (a) Express  $p$  in terms of  $q$  and  $r$  when

$$\frac{p-3r}{q} = 5, q \neq 0.$$

**1998**

- 2 (b) Find the value of

$$\frac{a-b+1}{a+b+1}$$

when  $a = \frac{1}{8}$  and  $b = 2$ .

- 3 (a) Express  $p$  in terms of  $q$  and  $t$  when

$$q + \frac{p}{5t} = 3, t \neq 0.$$

**1997**

- 3 (a) Express  $p$  in terms of  $q$  and  $t$  when

$$2p - q = 3(p - t).$$

**1996**

- 3 (a) Express  $q$  in terms of  $p$  and  $t$  when

$$2(p - 3q) = t.$$

**ANSWERS**

**2007** 2 (b) (i)  $\frac{3}{2}$

**2006** 3 (a)  $\frac{1}{2}$

**2005** 2 (a) 39

3 (a)  $x = \frac{c-b}{a}$

**2004** 2 (a) -39

**2003** 2 (a)  $y = -5$

**2002** 2 (c) (i)  $b = \frac{8a}{c+5}$  (ii)  $2^{\frac{1}{2}}$

**2001** 3 (a)  $a = 5$

**2000** 2 (a)  $\frac{21}{2}$

3 (a)  $p = \frac{8k}{t}$

**1999** 3 (a)  $p = 3r + 5q$

**1998** 2 (b)  $-\frac{7}{25} = -0.28$

3 (a)  $p = 15t - 5tq$

**1997** 3 (a)  $p = 3t - q$

**1996** 3 (a)  $q = \frac{2p-t}{6}$