# QT Substitution

Non Calculator

1. Work out the value of $2x + 2y$ when $x = 6$ and $y = 7$     (2 marks)

2. Work out the value of $7a - 6b$ when $a = 8$ and $b = 5$     (2 marks)

3. $p = 12r - 8$
Find the value of $p$ when $r = 3$     (2 marks)

4. $s = 0.5t + 4$
Find the value of $s$ when $t = 0.5$     (2 marks)

5. $a = 5$
  $b = 8$
Work out the value of $5a - 2b$     (2 marks)

6. $c = 6$
  $d = -2$
Work out the value of $4c + 2d$     (2 marks)

7. $e = 8$
  $f = -4$
Work out the value of $10e + 3f$     (2 marks)

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8. $g = -6$
   $h = -3$
   Work out the value of $12g + 3h$  (2 marks)

9. $j = -4$
   $k = -10$
   Work out the value of $8j - 4k$  (2 marks)

10. $L = 7m - 4n$

    $m = 15$
    $n = -3$
    Work out the value of $L$  (2 marks)

11. $P = 12q + 3r$

    $q = 10$
    $r = -10$
    Work out the value of $P$  (2 marks)

12. $S = t(u - 4)$

    $t = 7$
    $u = 4$
    Work out the value of $S$  (2 marks)

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13. $V = w(5 - x)$

   $w = 6$
   $x = -2$

Work out the value of $V$                                     (2 marks)

14. $X = 20yz$

   $y = 3$
   $z = 2$

Work out the value of $X$                                    (2 marks)

15. $a = 6$
   $b = -4$
   $c = 2$

Work out the value of $b^2 - 4\,ac$                           (2 marks)

16. $a = 5$
   $b = 8$
   $h = 4$

Work out the value of $A = \frac{1}{2}(a + b)\,h$                  (2 marks)

17. $y = mx + c$

   $m = -3$
   $x = 8$
   $c = -4$

Work out the value of $y$                                        (2 marks)

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Non Calculator

18. The cost of hiring a campervan is given by the formula $C = 150 + 25d$ where $d$ is the number days the campervan is hired

(a) Find the cost of hiring the campervan for 4 days.
(b) Work out the number of days the campervan was hired if the total bill was £325

(4 marks)

19. $s = ut + \frac{1}{2}at^2$

$u = 3$
$t = 6$
$a = 4$

Work out the value of $s$                                        (2 marks)

20. $s = ut + \frac{1}{2}at^2$

$u = -5$
$t = 6$
$a = 8$

Work out the value of $s$                                        (2 marks)

Total          / 42 marks