

MODUL 4
SKIM TUISYEN FELDA (STF) SPM 'ENRICHMENT'.
TOPIC: QUADRATIC EXPRESSIONS AND EQUATIONS.
TIME : 2 HOURS

1. Solve the quadratic equation

(a) $= x + 6$	
(b) $(w - 1)^2 - 3^2 = 0$	
(c) $2a^2 = 3(1 + a) + 2$	
(d) $= 4$	
(e) $= 7t - 4$	

a. $x^2 - 2 =$	
(g)	
a. $(2x + 1)(x - 2) = 7$	
(i)	
a. $3x(2x - 1) + 8x = 1$	

$(k) = y$	
a. $(r - 1)(r + 3) = 5(r + 3)$	
b. $7p - 2p^2 = 2(1 + p)$	
c. $5x =$	
$(o) = p$	
a. $4(5x - 1) =$	

(q)	
(r)	
(s)	
a. $y^2 + 9y - 1 = 3(y - 2)$	

MODULE 4 - ANSWERS
TOPIC: QUADRATIC EXPRESSIONS AND EQUATIONS.

Answer:

(a) $= x + 6$ $3x^2 - x - 12 = 0$1 $(3x + 4)(x - 3) = 0$1 $x = \quad x = 3$1,1	
a. $(w - 1)^2 - 3^2 = 0$	

$w^2 - 2w - 8 = 0$1 $(w+2)(w-4)=0$1 $w=4 \quad w=-2$1,1	
(c) $2a^2 = 3(1 + a) + 2$ $2a^2 - 3a - 5 = 0$1 $(a+1)(2a - 5) = 0$1 $a = -1 \quad x =$1,1	
(d) $= 4$ $5p^2 - p - 4 = 0$1 $(5p - 4)(p+1) = 0$1 $p = \quad p = -1$1,1	
(e) $= 7t - 4$ $3t^2 + 14t - 8 = 0$1 $(3t - 2)(t - 4) = 0$1 $t = \quad t = 4$1,1	
b. $x^2 - 2 =$ $4x^2 - 11x - 5 = 0$1 $(4x+1)(x - 3) = 0$1 $x = \quad x = 3$	
(g) $m^2 - 5m - 6 = 0$1 $(m - 6)(m + 1) = 0$1 $m = 6 \quad m = -1$1,1	
b. $(2x + 1)(x - 2) = 7$ $2x^2 - 3x - 9 = 0$1 $(x+3)(x - 3) = 0$1 $x = -3 \quad x = 3$ 1,1	
(i) $p^2 - 2p - 8 = 0$1 $(p+2)(p - 4) = 0$1	

p = -2 p = 4.....1,1	
b. $3x(2x - 1) + 8x = 1$ $6x^2 + 5x - 1 = 0$1 $(x+1)(6x - 1) = 0$1 $x = -1$ $x =$1,1	
(k) = y $3y^2 - 5y - 2 = 0$1 $(y+1)(y-2)=0$1 $y = -1$ $y = 2$1,1	
d. $(r - 1)(r + 3) = 5(r + 3)$ $r^2 - 3r - 18 = 0$1 $(r+6)(r-3)=0$1 $y = -6$ $y = 3$1,1	
e. $7p - 2p^2 = 2(1 + p)$ $2p^2 - 5p + 2 = 0$1 $(2p - 1)(2p + 5) = 0$1 $p =$ $p =$1,1	
f. $5x =$ $x^2 - 10x + 25 = 0$1 $(x-5)(x-5)=0$1 $x=5$1	
(o) = p $p^2 - 6p + 5 = 0$1 $(p - 1)(p + 5) = 0$1 $p = 1$ $p = -5$1,1	
b. $4(5x - 1) =$ $20x^2 - 11x - 3 = 0$1 $(5x + 1)(4x - 3) = 0$1	

$x = -$ $x = \dots\dots\dots 1,1$	
(q) $d^2 + 6d - 7 = 0 \dots\dots\dots 1$ $(d - 1)(d + 7) = 0 \dots\dots\dots 1$ $x = 1$ $x = -7 \dots\dots\dots 1,1$	
(r) $2m^2 + 3m - 2 = 0 \dots\dots\dots 1$ $(2m - 1)(m + 1) = 0 \dots\dots\dots 1$ $x = -2$ $x = \dots\dots\dots 1,1$	
(s) $3m^2 - 5m - 2 = 0 \dots\dots\dots 1$ $(3m + 1)(m - 2) = 0 \dots\dots\dots 1$ $x = 2$ $x = - \dots\dots\dots 1,1$	
b. $y^2 + 9y - 1 = 3(y - 2)$ $y^2 + 6y + 5 = 0 \dots\dots\dots 1$ $(y + 1)(y + 5) = 0 \dots\dots\dots 1$ $x = -1$ $x = -5 \dots\dots\dots 1,1$	