LEMBAR JAWABAN UTS 1

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Jawaban UTS

1.   a) 226_{10} = $1110\ 0010_2$
        b) 1011011_2 = 89_{10}

2.   a) $(a^2 + 2a)(3a^2 + 4a - 4)$
           $= 3a^4 + 4a^3 - 4a^2 + 6a^3 + 8a^2 - 8a$
           $= 3a^4 + 4a^3 + 6a^3 - 4a^2 + 8a^2 - 8a$
           $= 3a^4 + 10a^3 - 4a^2 - 8a$
        b) $(x - 2y)^2 - (2x - y)^2$
           $= (x - 2y - (x - 2y)) \times (2x - y + (2x - y))$
           $= (x - 2y - 2x + y) \times (x - 2y + 2x - y)$
           $= (-x - y) \times (3x - 3y)$
           $= (-x - y) \times 3(x - y)$
           $= 3(-x - y) \times (x - y)$

3.   a) A = {17, 19, 21, 23, 25, 27, 29, 31, 33, 35}
           B = {21, 23, 25, 27, 29, 31, 33, 35}
           C = {25, 27, 31}
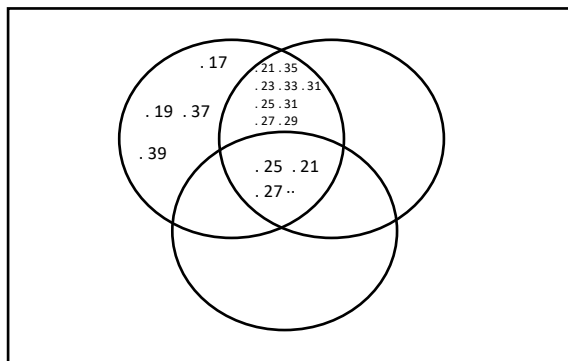
b) A ∩ B = {21, 23, 25, 27, 29, 31, 33, 35 }

C subset B

C = {25, 27, 31}

B = {21, 23, 25, 27, 29, 31, 33, 35}

Jadi C subset B

4. a) $(F)^{-1}$ (x)

$f(x) = 2x^2 + 1$

$y = 2x^2 + 1$

$2x^2 = y - 1$

$X^2 = \dfrac{y-1}{2}$

$X = \sqrt{\dfrac{y-1}{2}}$

$f^{-1}(y) = \sqrt{\dfrac{y-1}{2}}$

$f^{-1}(x) = \sqrt{\dfrac{x-1}{2}}$

b) (g O f) (2)

(g O f) (x)	= g (f(x))
	= $(2x^2 + 1) + 2$
	= $2x^2 + 3$
(g O f)(2)	= $2(2)^2 + 3$
	= 2 x 4 + 3
	= 11