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Kuis 1 Fungsi Kompleks
1. a> · u(x,y) + iv (x,y)
          misal : 2 = x+iu
          f(2) = 22 + 323
                = (xtiy)2+3(xtiy)3
                = x^2 + 2xyi - y^2 + 3(x^3 + 3x^2yi - 3xy^2 - iy^3)
                = x2 +2x41 - y2 + 3x3 +9x241 - 9xy2 - 3iy3
                = (x2-y2+3x3-9xy2) +i (2xy+9x2y-3y3)
         · U(r,+) + iv (r,+)
           misal : 2 = r (cos + i sin +).
           f(2) = r2(cos20 + 2i cos0 sin 0 - sin20) + 3r3(cos30 + 2i cos20 sin 0 - sin20 cos0 + i sin 0 cos20 - 2 sin20 cos0 - i sin30)
                  = r2 (cos2 0 +2i cos o sino -sin2 0) + 3r3 (cos3 0 +3i cos2 o sin o - 3 sin2 0 cos o - i sin3 o)
                  = 12(cos2 + - sin2+3rcos3 + - 9rsin2+ cos+) + i r2(cos+ + 9r cos2+ sin + -3r sin3+)
    b) · u(x,y) + iv (x,y)

\frac{1}{f(2) = i \cdot \hat{z} + Im(i/2)} = \frac{i(x-iy)}{x^2+y^2} = \frac{ix+y^2}{x^2+y^2}

= i(x-iy) + Im(i/x+iy)

          misal : 2 = x+i4 .
                = ix + y + \frac{x}{x^2 + y^2} = \frac{x}{x^2 + y^2} + y + ix
        · U(r,+) + iv (r,+)
          misal : 2=r (cos + i sin +).
          f(2) = i2 + Im (1/2)
                = ir(coso - i sino) + Im ( /r(coso+sino))
                i x cos + sin + i cos + sin + i cos + sin +
          r(cosetisine) cose-isine r(cosetsine)
           f(z) = i r \cos \theta + r \sin \theta + \frac{\cos \theta}{r} = r \sin \theta + \frac{\cos \theta}{r} + i r \cos \theta
                                                                                       3. f(2) = \frac{2(2^2 + (2-i)2 - 2i)}{2-i}
2. U(x,y) = x2-y2+x dan v(x,y) = 2xy-y
    W = U(x,y) + iv(x,y)
                                                                                            \lim_{2 \to i} \frac{2(2-i)(2+2)}{2-i} = \lim_{2 \to i} 2(2+2)
       = x2-y2+x+i(2x4-y)
       " (x+iy)" + x-i4
       = 22 + Z
                                                                                                                  = i2 + 2i = 2i-1
4. W= 2-2i ; 2=0,2i,1,i,-2i,1+i
    £1 = 0
                 -> W1 = -2i
     22=21 -> W2=0
     \frac{2}{3} = 1
                -) W3 = 1-2i
     24 = 1 -> W4 = -1
     25=-21
                -> W5 = -41
                → W6 = 1-i
     26 = 1+i
                                           Bidang 2
                                                                                    Bidang W
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