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1. Ans!

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

Newton Raphson method,

$$\mathcal{K}_{i+1} = \mathcal{K}_i - \frac{f(\mathcal{K}_i)}{f(\mathcal{K}_i)}$$

Stenation 1,

$$x_1 = x_0 - \frac{f(x_0)}{f'(x_0)}$$

$$=4-\frac{f(4)}{f'(4)}$$

$$=4-\frac{20}{16}$$

The second Hendalive adding is

Afondaica?

Itenation 2: fon, x,=2 $x_2 = x_1 - \frac{f(x_1)}{f(x_1)}$ Me water perphoson Alenotion I, = 2 - 3 = 6-2 = 3 = 1.3333 . The second Henative value is

1.3333.

2-Ans:

Drawbacks of bisection method are given below:

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show convengence: As the bisection method convenge forom two ends it so if one of the end on both of the are near the root initially the then it would take a lot of time to convenge to the noot.

t) function dependency: In bisect & To implement bisection wethod of $f(x_i)^* f(x_u) < 0$ this rule must be satisfied. But let assume for a function $f(x) = x^2$ this function won's satisfy the rule. So bisection is dependent of what type of function it is.

*) root existance confusion: If a function changes sign frequently the bisection method won't be able to find a poot cause there may not abe a single root on ean be multiple noots? sout most reminer post in tighty due then it would take a of the to converge to the nort. 4) function dependency In Sixed pisection method & f(x)) + f(xi) < c this aute must be satisfied. But let assume a function f(00) = 20 + 1/4s Sundion society the reals of so pisection is depond is it is not take of fourthow it is: