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given(a,b)R(c,d)suchthata+d=b+c		b)checking if it is symmetric;				
		given(a,b)R(c,d)suchthata+d=b+c				

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consider (c,d)R(a,b)onA \times A
                  applying given condition\Rightarrowc+b=d+awhichsatisfiesgivencondition
                 Hence R is symmetric.
                  c)checking if it is transitive;
                 Let(a,b)R(c,d)and(c,d)R(e,f)
                  and(a,b),(c,d),(e,f) \in A \times A
                  applying given condition:\Rightarrow a+d=b+c \rightarrow 1 and c+f=d+e \rightarrow 2
                  equation 1 \Rightarrow a - c = b - d
                  nowaddequation1and2;
                  \Rightarrowa-c+c+f=b-d+d+e
                  \Rightarrowa+f=b+e
                  \therefore(a,b)R(e,f) also satisfies the condition
                  Hence R is transitive.
                 We have gof(x) = g((3x + 4)/(5x - 7)) = (7((3x + 4)/(5x - 7)) +
5
                 4)/(5((7x + 4)/(5x - 7)) - 3) = (21x + 28 + 20x - 28)/(15x + 20 - 28))/(15x + 20 - 28)/(15x + 20 - 28)/(15x + 20 - 28))/(15x + 20 - 28)/(15x + 20 - 28)/(15x + 20 - 28))/(15x + 20 - 28)/(15x + 28)/(15x + 20 - 28)/(15x + 28)/
                  15x + 21) = 41x/41 = x
                 Similarly,
                 fog(x) = f((7x + 4)/(5x - 3)) = (3(7x + 4)/(5x - 3)) + 4)/(5(7x + 4))
                 4)/(5x - 3)) - 7) = (21x + 12 + 20x - 12)/(35x + 20 - 35x + 21) =
                  41x/41 = x
                 Thus, gof (x) = x, \forall x \in B and fog (x) = x, \forall x \in A, which
                 implies that gof = IB and fog = IA.
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6
          We have, the function f : R \rightarrow R defined by
          f(x) = \frac{x}{x^{2+1}} \forall x \in R
          For one-one:
          Let \ x_1, x_2 \ \in \ \mathsf{R}
          Now,
          f(x_1) = f(x_2)
          \Rightarrow \frac{x_1}{x_1^{2+1}} = \frac{x_2}{x_2^{2+1}}
         \Rightarrow x_1 x_2^2 + x_1 = x_2 x_1^2 + x_2
          \Rightarrow x_1 x_2^2 - x_2 x_1^2 + x_1 - x_2 = 0
          \Rightarrow -x_1x_2[x_1 - x_2] + (x_1 - x_2) = 0
          \Rightarrow (x_1 - x_2)(1 - x_1x_2) = 0
          \Rightarrow x<sub>1</sub> = x<sub>2</sub> or x<sub>1</sub>x<sub>2</sub> = 1
          \Rightarrow x<sub>1</sub> = x<sub>2</sub> or x<sub>1</sub>x<sub>2</sub> = 1
          But, there exists some values of x_1 and x_2 so that x_1 \neq x_2 but f(x_1) = f(x_2)
          Like x_1 = 2 and x_2 = \frac{1}{2} then,
          f(x_1) = \frac{2}{5} and f(x_2) = \frac{2}{5} but x_1 \neq x_2
          Hence, f(x) is not one-one.
          For onto:
          Again, consider a value '1' as element in co-domain R.
          \Rightarrow \frac{x}{x^{2}+1} = 1
          \Rightarrow x^2 + 1 = x
```

i.e., quadratic equation in x	
Here, discriminant D < 0.	
Hnece, there is no real value of $x \in R$ for which $f(x) = 1$.	
∴ f is not an onto function.	
Thus, f is neither one-one nor onto.	