Answer 1 (a)

Samples : [34, 21, 56, 76, 98]

new range [10, 20]

newMax = 20

newMin = 10

Min = 21

Max = 98

For 34

$$v' = \frac{v - Min}{Max - Min}(newMax - newMin) + newMin$$

$$= \frac{34 - 21}{98 - 21}(20 - 10) + 21$$

$$= \frac{13}{77}(10) + 21 = 1.69 + 21 = 22.69$$

for 21

$$v' = \frac{21 - 21}{98 - 21}(20 - 10) + 21 = 0 + 21 = 21$$

for 56, $v = \frac{56 - 21}{98 - 21}(20 - 10) + 21$

$$= \frac{35}{77}(10) + 21 = 4.55 + 21 = 25.55$$

for 76, $v = \frac{76 - 21}{98 - 21}(20 - 10) + 21 = 7.14 + 21 = 28.14$

for 98 $= \frac{98 - 21}{98 - 21}(20 - 10) + 21 = 10 + 21 = 31$