№	y_actual	y_predicted
1	3	4
2	4	3,5
3	7	8
4	9	7
5	6	5
6	5	6
7	7	7
8	4	4,5
9	5,5	5
10	3	2,5

y_i = umumiy qiymatlar

$\hat{y}_i$ = predicted qiymat

$\bar{y}_i$ => mean of actual qiymatl

$$MSE = \frac{\sum_{i=1}^{n} (y_{actual} - y_{predicted})^2}{n}$$

② ① ③

n=10 ④

(1) $(3-4)^2 = 1$
(2) $(4-3,5)^2 = 0,25$
(3) $(7-8)^2 = 1$
(4) $(9-7)^2 = 4$
(5) $(6-5)^2 = 1$
(6) $(5-6)^2 = 1$
(7) $(7-7)^2 = 0$
(8) $(4-4,5)^2 = 0,25$
(9) $(5,5-5)^2 = 0,25$
(10) $(3-2,5)^2 = 0,25$

(b) 9 => summation

(c) $\frac{9}{10} = 0,9$

$RMSE = \text{Sqrt}(MSE) = \sqrt{0,9} \approx 0,9486$

$MAE = \frac{1}{n} \sum_{i=1}^{n} |y_i - \hat{y}_i|$

↳ MSE dan MAE bunda Biz kvadratga ko'tarmay topamiz.

(1) $(3-4) = 1$
(2) $(4-3,5) = 0,5$
(3) $(7-8) = 1$
(4) $(9-7) = 2$
(5) $(6-6) = 1$
(6) $(5-6) = 1$
(7) $(7-7) = 0$
(8) $(4-4,5) = 0,5$
(9) $(5,5-5) = 0,5$
(10) $(3-2,5) = 0,5$

Jami: $1+0,5+1+2+1+1+0+0,5+0,5+0,5 = 8$

$\frac{1}{n} \cdot 8 = \frac{8}{10} = 0,8$

$R^2 = 1 - \frac{MSE \cdot n}{\text{Total Error}} = 1 - \frac{9}{\text{Total Error}}$

$\bar{y}_i = \frac{3+4+7+9+6+5+7+4+5,5+3}{10} = 5,35$

Endi esa o'sha chiqqan 5,35 ni har bir y_actual dan ayirib kvadratga ko'taramiz.

① $(3-5,35)^2 = 5,5225$
② $(4-5,35)^2 = 1,8225$
③ $(7-5,35)^2 = 2,7225$
④ $(9-5,35)^2 = 13,3225$
⑤ $(6-5,35)^2 = 0,4225$
⑥ $(5-5,35)^2 = 0,1225$
⑦ $(7-5,35)^2 = 2,7225$
⑧ $(4-5,35)^2 = 1,8225$
⑨ $(5,5-5,35)^2 = 0,0225$
⑩ $(3-5,35)^2 = 5,5225$

$$R^2 = 1 - \frac{MSE \cdot y}{Total\ Error} = 1 - \frac{9}{34,07475} =$$

$$\approx 0,73 \approx \boxed{0,7}$$