Homework #4.2

5.26: * Value of EstimatedRTT = 4 seconds
SampleRTT = 1 second
$\delta = \frac{1}{8}$

- Difference = sampleRTT − EstimatedRTT
- Deviation = Deviation + δ(|Difference| − Deviation)
- Timeout = μ · EstimatedRTT + ϕ · Deviation
- EstimatedRTT = EstimatedRTT + (δ · Difference)

1st

Difference = 1 − 4 = −3

Deviation => $1 + \frac{1}{8}(|-3| - 1) = 1 + \frac{1}{8} \cdot 2 = 1.25$

Timeout = μ · EstimatedRTT + ϕ · Deviation => $1 \cdot 3.63 + 4 \cdot 1.25 = 3.63 + 5 = 8.63$

EstimatedRTT = $4 + \left(\frac{1}{8} \cdot (-3)\right) = 3.63$

2nd

Difference = 1 − 3.63 = −2.63

EstimatedRTT = $3.63 + \left(\frac{1}{8} \cdot (-2.63)\right) = 3.31$

Deviation = $1.25 + \frac{1}{8}(|-2.63| - 1.25) = .50 + \frac{1}{8} \cdot 1.38 = 1.42$

Timeout = μ · EstimatedRTT + ϕ · Deviation = $1 \cdot 3.31 + 4 \cdot 1.42 = 3.31 + 5.68 = 8.99$

3rd

Difference = 1 − 3.31 = −2.31

Deviation = $1.42 + \frac{1}{8}(|-2.31| - 1.42)$

Timeout = μ · EstimatedRTT + ϕ · Deviation = $1 \cdot 3.03 + 4 \cdot 1.53 = 3.03 + 6.12 = 9.15$