

Solutions

2.1 Use $n=25$ in the model: $1+0.2\times 25=6$ minutes.

2.2 Residual= $8-6=2$ minutes.

2.3 Mean= $(4+6+8)/3=6$.

2.4 False. Do not copy a sample exploration, invent data or manufacture personal engagement. A prediction is not evidence until it is compared with observations. Consent and privacy matter when collecting school data.

2.5 A A condition adopted to make a mathematical model possible and whose effect should be evaluated.

3.1 Predictions 4, 7, 10; residuals 0, 0, 1 minute. Collect repeated observations across a wider justified range, inspect curvature/variation and compare models. One residual pattern from three invented values does not validate causality or certify an IB exploration.