ANSWERS

PERCENTAGE OF ERROR

Read carefully, each problem presents an estimated value and a real one. Use the percentage error formula. Write your answer, include your answer as a percentage to two decimal places..

$$\text{Percent Error} = \frac{\textit{Actual Value} - \textit{Estimated Value}}{\textit{Actual Value}} \times 100\%$$

1) A software developer estimated it would take 15 days to complete a task, but it actually took 18 days.

Solution:

Percent Error: $\frac{18-15}{18} \times 100 = \frac{3}{18} \times 100 = 16.67\ \%$

2) A school budget committee estimated annual sports expenses would be $10,000, but the actual expenses were $9,500.

Solution:

Percent Error: $\frac{9,500-10,000}{9,500} \times 100 = \frac{-500}{9,500} \times 100 = -5.26\ \%$

3) A retail store estimated it would sell 200 units of a new product in its first month, but it sold 220 units.

Solution:

Percent Error: $\frac{220-200}{220} \times 100 = \frac{20}{220} \times 100 = 9.09\ \%$

4) A city council estimated that a public consultation would attract 500 residents, but only 450 residents attended.

Solution:

Percent Error: $\frac{450-500}{450} \times 100 = \frac{-50}{450} \times 100 = -11.11\ \%$

5) An agricultural study estimated that a field would produce 1,000 kilograms of wheat, but the actual yield was 1,050 kilograms.

Solution:

Percent Error: $\frac{1,050-1,000}{1,050} \times 100 = \frac{50}{1,050} \times 100 = 4.76\ \%$

How Did You Do?