What Is the High-Low Method?

Worksheet

The high-low method estimates variable cost per unit as the change in cost divided by the change in activity between the highest and lowest activity periods, then backs out the fixed cost.

Questions

1. The high-low method uses which data points?

A) All observations
B) Only the highest and lowest activity levels
C) Only the average
D) Only the median

2. High activity: 1,000 units, $15,000. Low activity: 400 units, $9,000. What is VC per unit?

A) $10
B) $6
C) $15
D) $9

3. What is a major limitation of the high-low method?

A) It's too complex to compute
B) It ignores all data points except two, which may not be representative
C) It requires calculus
D) It only works for fixed costs

4. After computing VC, how do you find fixed cost?

A) FC = VC Activity
B) FC = Total cost (VC Activity) at either point
C) FC = Total cost / Activity
D) FC = Activity VC

5. A company's costs were $24,000 at 2,000 units (highest) and $16,000 at 800 units (lowest). Find the variable cost per unit and the fixed cost.

6. Machine hours ranged from 300 (lowest, cost $9,500) to 900 (highest, cost $16,700). Estimate variable cost per machine hour.

7. Using the data from Example 2, estimate total cost at 700 machine hours.

8. Define: What does the high-low method estimate?

9. Define: What is the variable cost formula in the high-low method?

10. Define: What data points does the high-low method use?

Answer Key

1. B) Only the highest and lowest activity levels - It relies solely on the two extreme activity levels.

2. A) $10 - VC = (15,0009,000)/(1,000400) = 6,000/600 = $10.

3. B) It ignores all data points except two, which may not be representative - Using only two points can produce a biased estimate if either is an outlier.

4. B) FC = Total cost (VC Activity) at either point - Rearranging TC = FC + (VCQ) gives FC = TC (VCQ).

5. VC = (24,000 16,000) / (2,000 800) VC = 8,000 / 1,200 = $6.67 per unit FC = Cost_high (VC Activity_high) = 24,000 (6.67 2,000) = 24,000 13,333 = $10,667

6. VC = (16,700 9,500) / (900 300) VC = 7,200 / 600 = $12.00 per machine hour

7. FC = Cost_low (VC Activity_low) = 9,500 (12 300) = 9,500 3,600 = $5,900 TC = FC + (VC Q) = 5,900 + (12 700) = 5,900 + 8,400 = $14,300

8. The fixed and variable components of a mixed cost, using only the highest and lowest activity levels.

9. VC = (Cost at high activity Cost at low activity) / (High activity Low activity).

10. Only the two extreme observations - highest and lowest activity level - ignoring all others.