

ClassTycoon break-even analysis instructor answer key

The fictional example covers one month in US dollars. Fixed costs remain unchanged within the 300-notebook capacity. Variable costs rise by \$4 for each notebook sold.

At \$12, contribution per notebook is \$12 minus \$4, or \$8. Break-even sales are \$1,200 divided by \$8, or 150 notebooks. Revenue at break-even is \$1,800. Variable costs of \$600 plus fixed costs of \$1,200 also total \$1,800.

At 200 sales, revenue is \$2,400. Variable costs are \$800. Operating profit is \$2,400 minus \$800 minus \$1,200, or \$400.

At \$10, contribution is \$6. Break-even sales are 200 notebooks. Selling 240 generates revenue of \$2,400 and variable costs of \$960. Operating profit is \$240. Revenue matches the original forecast, but profit is \$160 lower.

Preserving \$400 profit requires total contribution of \$1,600. Dividing by \$6 gives 266.67 notebooks, rounded up to 267 whole units. Profit at 266 is \$396. Profit at 267 is \$402.

Capacity permits 267 sales. The 240-unit forecast does not support that volume. Look for evidence about customer response and rival prices. Do not treat the break-even calculation as a demand forecast.

With fixed costs of \$1,500 and a \$10 price, break-even sales are 250 notebooks. At 240 sales, contribution totals \$1,440 and the operating loss is \$60.

Keeping the \$12 price produces the higher forecast profit in the original case. Accept a different recommendation when the pair supports changed assumptions and calculates their effects correctly.

Check the use of contribution rather than price in the denominator, whole-unit rounding, and the distinction between revenue and operating profit. The model excludes tax, financing, inventory changes, and cash timing.

Ask pairs to defend their recommendation before showing these answers.