

Solutions

2.1 B Compare a common service over a stated lifetime. Separate fixed tooling cost from cost per item. Include repair, energy, transport and realistic end-of-life pathways rather than using a recycled label as the whole judgement.

2.2 $\text{quantity} = \text{fixed-cost difference} / \text{unit-cost difference} = 400 / 5 = 80 \text{ items}$.

2.3 False. A cheaper process is not automatically preferable. Cost estimates need currency, quantity and assumptions, and prototypes do not prove mass-production consistency.

2.4 design for disassembly. design for disassembly means Design supporting separation and replacement of parts.

3.1 Equality at 100. At 50: A650,B450; at 150: A950,B1150. Quality, capacity, waste, usability and lifecycle evidence may outweigh money cost.