Solutions

Marking: **K** = knowledge, **App** = using the data or case, **An** = analysis (explaining each step: cause, then effect), **Ev** = evaluation (a judgement with a reason). In calculations, **M1** is for the method and **A1** for the answer. Longer answers are marked in levels: the top level needs clear analysis **and** a judgement with a reason.

Each answer shows the steps, then the **result**.

2.1

- food: $40/4 =$ **10**
- clothes: $40/8 =$ **5**

2.2

- 20 food and 10 clothes
- the line shifts out, parallel to the old one

3.1

- to stay equally satisfied, having more of one good means having less of the other: it slopes down (K)
- the more X a consumer has, the less Y they will give up for one more X (An)
- this falling rate of substitution makes the curve bow in towards the origin (An)

3.2

- substitution effect: the good is now cheaper than others, so the consumer buys more of it (K)
- income effect: the lower price raises real income, so the consumer can buy more of all goods (K)
- for a normal good both effects raise quantity; for an inferior good the income effect works the other way (An)

3.3

(a) $120/6 =$ **20** before; $120/4 =$ **30** after

(b) the budget line pivots out on the X axis; the best choice moves to a higher indifference curve (An); draw a line parallel to the new budget line touching the old curve: the move along the old curve is the substitution effect (An); the move from there to the new curve is the income effect (An); for a normal good both raise the quantity of X (An)

(c) points to include:

- it explains choice without measuring utility: it only ranks combinations (An)
- it separates income and substitution effects and explains inferior and Giffen goods (An)
- but it uses only two goods, and assumes full information and fixed tastes (An)
- people do not draw curves; habits and impulse buying matter (An)
- judgement: useful for showing how price and income changes work, but limited as a picture of real shopping (Ev)

Levels: **top** (6–8) clear analysis, each step explained, and a judgement with a reason; **middle** (3–5) some analysis, judgement weak or missing; **bottom** (1–2) relevant points, little explanation.