Solutions

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

2.1

- any three of: recovered classical texts and the habit of checking them; instruments; mathematics; printing and correspondence networks

2.2

- they made findings cumulative rather than isolated, so work built on other work

2.3

(a)

- it names an event, not a condition

(b)

- a rewritten condition, e.g. “A mathematics capable of expressing motion as general law had become available”

3.1 B

- quantification allows comparison and test

3.2 B

- the method was extended to human affairs

3.3

(a)

- it accelerates it

(b)

- an isolated investigator repeats work already done and cannot be corrected by others who know the field

3.4

(a)

- Newton explained the whole universe with a few mathematical laws found by observation and reason, so thinkers expected human affairs (government, the economy, crime) to follow natural laws that reason could discover too

(b)

- for example: Locke argued government rests on the consent of the governed and exists to protect natural rights, so a ruler who breaks them may be resisted; or Montesquieu’s separation of powers denies any single ruler control of law, execution and justice

(c)

- mercantilism held wealth was a fixed stock of bullion won by state-regulated trade; Smith argued wealth is the goods a nation produces, best increased by free trade, the division of labour and the “invisible hand” of self-interest, with little state regulation