Formulae and key data

First published: 4 June 2015, Revised: 29 August 2018

This is a list of formulae to support teaching of our AS/A-level Business specification (7131/7132).

Number	Formula
1	**Revenue (Sales or Turnover) =** Selling price per unit × Number of units sold **Variable costs (Total variable costs) =** Variable cost per unit × Number of units sold **Total costs =** Fixed costs + Variable costs **Profit =** Total revenue − Total costs OR Total contribution − Fixed costs
2	**Market capitalisation of a business =** Number of issued shares × Current share price
3	**Expected value of a decision with two possible outcomes eg**. A & B = $\left[\text{Pay-off of A} \times \text{probability of A}\right] + \left[\text{Pay-off of B} \times \text{probability of B}\right]$ **Net gain =** Expected value − Initial cost of decision
4	**Market growth (%) =** $$\frac{\text{Change in the size of the market over a period}}{\text{Original size of the market}} \times 100$$
5	**Market share (%) =** $$\frac{\text{Sales of one product OR brand OR business}}{\text{Total sales in the market}} \times 100$$
6	**Added value =** Sales revenue − costs of bought-in goods and services
7	**Labour productivity =** $$\frac{\text{Output over a time period}}{\text{Number of employees}}$$

Number	Formula
8	**Unit costs (average costs)=** $$\dfrac{\text{Total costs}}{\text{Number of units of output}}$$
9	**Capacity utilisation (%) =** $$\dfrac{\text{Actual output}}{\text{Maximum possible output}} \times 100$$
10	**Return on investment (%) =** $$\dfrac{\text{Profit from the investment (£)}}{\text{Cost of the investment (£)}} \times 100$$
11	**Gross Profit =** Revenue − Cost of Sales **Profit from Operations** = Operating profit = Gross profit − Operating Expenses **Profit for year** = Operating profit + Profit from other activities − Net finance costs − Tax
12	**Gross profit margin (%) =** $$\dfrac{\text{Gross profit}}{\text{Revenue}} \times 100$$ **Profit from operations margin** = Operating profit margin (%) = $$\dfrac{\text{Operating profit}}{\text{Revenue}} \times 100$$ **Profit for year margin (%) =** $$\dfrac{\text{Profit for year}}{\text{Revenue}} \times 100$$
13	**Variance =** Budgeted figure – actual figure

Number	Formula
14	**Contribution per unit =** Selling price $-$ Variable costs per unit **Total contribution =** Contribution per unit $\times$ Units sold OR **Total contribution** $=$ Total revenue $-$ Total variable costs
15	**Break-even output =** $$\frac{\text{Fixed costs}}{\text{Contribution per unit}}$$ **Margin of safety =** Actual level of output $-$ Break-even level of output
16	**Labour turnover (%) =** $$\frac{\text{Number of staff leaving}}{\text{Number of staff employed by the business}} \times 100$$
17	**Employee retention rate (%) for a particular time period =** $$\frac{\text{Number of employees who remained with the business for the whole period of time}}{\text{Number of employees at start of the time period}} \times 100$$
18	**Employee costs as percentage of turnover =** $$\frac{\text{Employee costs}}{\text{Turnover}} \times 100$$
19	**Labour cost per unit =** $$\frac{\text{Labour costs}}{\text{Units of output}}$$
20	**Return on capital employed (ROCE)(%) =** $$\frac{\text{Operating profit}}{\text{Total equity + non-current liabilities}} \times 100$$ Where total equity + non-current liabilities = capital employed

Number	Formula
21	**Current ratio =** $\dfrac{\text{Current assets}}{\text{Current liabilities}}$
22	**Gearing (%) =** $\dfrac{\text{Non-current liabilities}}{\text{Total equity} + \text{non-current liabilities}} \times 100$ Where total equity + non-current liabilities = capital employed
23	**Payables days =** $\dfrac{\text{Payables}}{\text{Cost of sales}} \times 365$
24	**Receivables days =** $\dfrac{\text{Receivables}}{\text{Revenue}} \times 365$
25	**Inventory turnover =** $\dfrac{\text{Cost of sales}}{\text{Average inventories held}}$
26	**Average rate of return (%) =** $\dfrac{\text{Average annual return (£)}}{\text{Initial cost of project (£)}} \times 100$

Please note:

It is possible that there may be alternative formulae for some of the calculations listed. Whilst these will be credited if used appropriately, the data in the exam may not be presented in a format that makes the different formula easily usable.

We would therefore recommend using the information presented in this list when preparing for AQA AS/A-level Business exams.