**Exam practice**

1. The table below shows a firm's fixed and variable costs of production at different levels of output. Calculate the level of output where average costs are at their lowest. (2)

|  |  |  |
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| **Output (units)** | **Fixed Costs ($)** | **Variable Costs ($)** |
| 20 | 300 | 40 |
| 30 | 300 | 75 |
| 40 | 300 | 120 |
| 50 | 300 | 250 |

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1. Johnson's Candles has fixed costs of $4000 each month. Its average variable costs are $3 per candle. The firm's current level of demand is 2500 candles per month. The average price of its candles is $6.
2. Using an example, explain what is meant by a fixed cost of production. (2)

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1. Calculate the firm's current average costs. (2)

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1. Calculate the firm's current total costs of production each month. (2)

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1. Calculate the profit if demand increases to 3000 candles per month.(3)

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1. Juke Engineering produces batteries for a major car-maker. Juke's monthly cost structure is shown in the table below. Assume that the firm's average variable costs of production remain constant at all levels of output shown.

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| **Output level (batteries)** | **Total Costs ($)** |
| 1000 | 50,000 |
| 2000 | 80,000 |
| 3000 | 110,000 |

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1. Calculate the average variable costs of production for Juke Engineering. (2)

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1. Calculate the value of its monthly total fixed costs. (2)

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1. Calculate the change in average costs of production if Juke Engineering increases its production from 1000 batteries per month to 3000 batteries per month. (2)

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