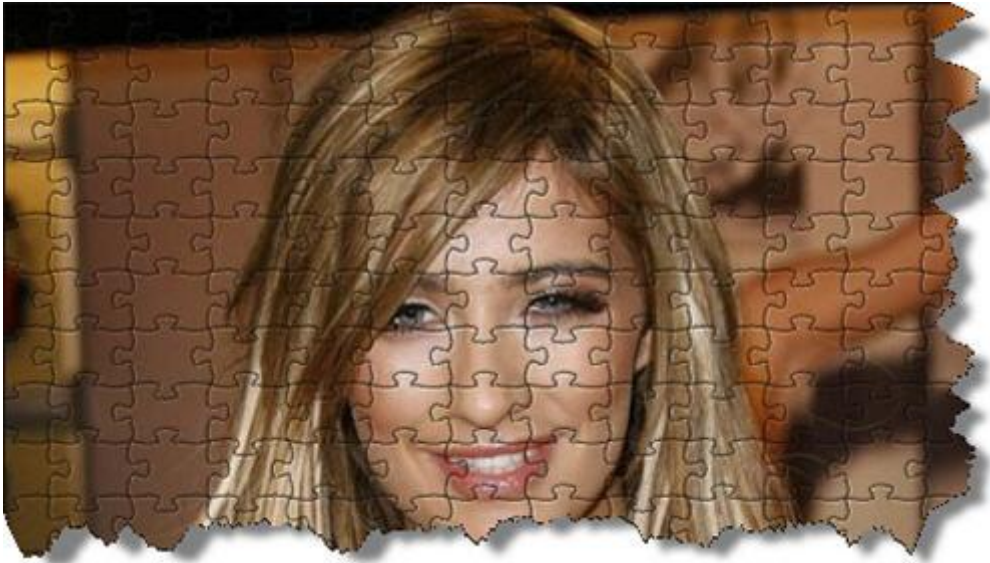


## Putting the Pieces Together



It's tough being a part-time celebrity, so Chantelle has invested in a new business venture that will pay rich dividends when the media spotlight has moved on.

Jigsaws2Go makes personalised jigsaw puzzles. Customers upload favourite photos and the Jigsaws2Go factory turns them into high quality boxed puzzles – the ideal gift for a special occasion.

Chantelle's accountant is good – but he's short of time handling all her other media deals. So he has provided you with some financial information about the business and asked you to complete some questions.

**Over to you!**

# Jigsaws2Go Financial Information

## Stage 1

### Latest Monthly Data

|                          |         |
|--------------------------|---------|
| Selling price per unit   | £6      |
| Variable cost per unit   | £2      |
| Fixed costs per month    | £20,000 |
| Maximum output per month | 10,000  |
| Actual output per month  | 7,500   |
| Sales volume % of output | 100.0%  |
| Sales demand per month   | 7,500   |

## Stage 2

Chantelle decides to cut her selling price by £1. As a result, demand increases and the factory operates at 90% capacity utilisation. However, fixed costs rise by £2,000 per month as the office team is expanded to handle the additional demand.

# Your Tasks

**(1) Using the information provided in Stage 1, please calculate:**

|                                |  |
|--------------------------------|--|
| Capacity utilisation per month |  |
| Total sales revenue per month  |  |
| Net profit per month           |  |
| Breakeven output               |  |
| Monthly contribution           |  |

**2 Using the information provided for Stage 2, please calculate:**

|                                      |  |
|--------------------------------------|--|
| The new monthly demand (units)       |  |
| New monthly revenue and contribution |  |
| Monthly net profit                   |  |

# Answers

## (1) Stage 1

|                                |   |
|--------------------------------|---|
| Capacity utilisation per month | Maximum output per month – 10,000 units<br>Actual output per month – 7,500 units<br>Capacity utilisation = $7,500 / 10,000$<br><b>= 75%</b>   |
| Total sales revenue per month  | Output – 7,500 units<br>@ selling price of £6 per unit<br><b>= £45,000 sales per month</b>  |
| Net profit per month           | Monthly sales = £45,000<br>Monthly variable costs = 7,500 unit x £2 per unit = £15,000<br>Monthly fixed costs = £20,000<br>Net profit = £45,000 - £15,000 - £20,000<br><b>= £10,000</b> |
| Breakeven output               | Contribution per unit = £6 - £2 = £4 per unit<br>Fixed costs = £20,000<br>Breakeven output = Fixed costs / Contribution per unit<br>= £20,000 / £4 per unit<br><b>= 5,000 units</b>     |
| Monthly contribution           | Contribution per unit = £4<br>Monthly output = 7,500 units<br><b>Monthly contribution = £30,000</b>   |

## 2 Stage 2

|                                      |  |
|--------------------------------------|--|
| The new monthly demand (units)       | <p>Maximum output = 10,000 units per month</p> <p>New capacity utilisation = 90% x 10,000 units<br/>= 9,000 units per month</p>                                    |
| New monthly revenue and contribution | <p>Revenue = 9,000 units x £5<br/>= £45,000 (unchanged from before, in total)</p> <p>Monthly contribution = 9,000 units x contribution per unit (£3) = £27,000</p> |
| Monthly net profit                   | <p>Monthly contribution = £27,000</p> <p>Monthly fixed costs = £22,000</p> <p>Monthly net profit = £27,000 - £22,000<br/>= £5,000</p>                              |