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# The price is right: How much should the new iPhone cost?

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**T**he high-end smartphone market is a very lucrative and competitive sector. Apple have been the market leader for many years since its pioneering iPhone was released in 2007, until recent figures suggested that South Korean firm *Samsung* now have the greatest operating profits, eclipsing Californian-based Apple for the first time. In order to regain their position as the market-leader, Apple will have to choose the retail selling price for their new iPhone 6 very carefully.

For several years, the smartphone market has been dominated by Apple's iPhone series of products. But with many phones being released on Google's Android operating system there is now heavy competition, with other alternative phone operating systems also looking to expand in popularity – such as Microsoft Windows Phone, Firefox, Ubuntu and Blackberry OS 10. Samsung and their flagship *Galaxy S* series of smartphones have recently knocked Apple off the top-spot in the smartphone market. In order to compete in such a busy marketplace, all phone manufacturers, including Apple, need to release new phones to keep up with rivals that balance the latest technology with acceptable costs.

Apple is currently creating a new mobile phone model, the iPhone 6, and wants to reach the sales goal of 20 million units. One of the major decisions is determining the selling price for the new product that would be compatible with both Apple and its customers. A team focused on pricing is currently directing some research and calculations to establish the best price for the iPhone 6.



The iPhone 5S was released in September 2013, with its successor, the iPhone 6, due for release in mid-2014.

The production department has informed the pricing team that the higher the price the iPhone 6 sells at, the greater the number of phones that can be made. Hence, it is very important to get the price 'right': if the price is too low, not enough phones will be produced

– if it's too high, too many will be produced, creating a lot of unsold stock. The pricing team asked approximately how many units of the iPhone 6 could be produced if the selling price was £550. The production department estimated that they would only be able to produce 10 million units if the iPhone 6 was sold at this price, and that the selling price would have to be at least £700 for enough phones to be produced for Apple to reach its sales goal.



The release of a new iPhone often leads to large crowds queueing outside stores days before it is available to buy.

The pricing team has conducted a worldwide survey investigating potential demand for the new iPhone 6. This survey asked different people whether or not they would be willing to buy the iPhone 6 at a range of prices. Using information from this survey and sales data from other iPhone and Apple products, the pricing team has collated the information shown in Table 1 below. They intend to use this information to find an appropriate sales price for the new iPhone so they will meet the simultaneous objectives of (i) being able to meet demand, and (ii) not producing excess stock.

Price (£ hundreds)	4.5	5	5.5	6	6.5	7
Demand (millions)	23	19	18	11	8	3

Table 1: Estimated demand, according to proposed selling price, for the new iPhone.

## Suggested topics to investigate

- Consider the effect of increasing the cost of an iPhone in terms of the number of phones Apple produce. Can you model this effect in terms of *supply*?
- How can the data from the pricing team's survey be used to find a statistical model for *demand*? What can you say about the significance of this model?
- Look again at the last sentence of the case study. Can you help the pricing department find a solution to their dilemma – is it possible to find an optimum price that strikes a balance between the supply and demand?
- Can you also convey your findings using suitable visual methods?
- Do you think Apple can hit their sales targets? How much revenue do you think they could make?