## Self-Check Questions

[1](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-8#ch08mod01_sques01-solution).

Firms in a perfectly competitive market are said to be “price takers”—that is, once the market determines an equilibrium price for the product, firms must accept this price. If you sell a product in a perfectly competitive market, but you are not happy with its price, would you raise the price, even by a cent?

[2](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-8#ch08mod01_sques02-solution).

Would independent trucking fit the characteristics of a perfectly competitive industry?

[3](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-8#ch08mod02_sques01-solution).

Look at [Table 8.13](#ch08mod02_tab12). What would happen to the firm’s profits if the market price increases to $6 per pack of raspberries?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Quantity | Total Cost | Fixed Cost | Variable Cost | Total Revenue | Profit |
| 0 | $62 | $62 | - | $0 | −$62 |
| 10 | $90 | $62 | $28 | $60 | −$30 |
| 20 | $110 | $62 | $48 | $120 | $10 |
| 30 | $126 | $62 | $64 | $180 | $54 |
| 40 | $144 | $62 | $82 | $240 | $96 |
| 50 | $166 | $62 | $104 | $300 | $134 |
| 60 | $192 | $62 | $130 | $360 | $168 |
| 70 | $224 | $62 | $162 | $420 | $196 |
| 80 | $264 | $62 | $202 | $480 | $216 |
| 90 | $324 | $62 | $262 | $540 | $216 |
| 100 | $404 | $62 | $342 | $600 | $196 |

Table 8.13

[4](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-8#ch08mod02_sques02-solution).

Suppose that the market price increases to $6, as [Table 8.14](#ch08mod02_tab13) shows. What would happen to the profit-maximizing output level?

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Quantity | Total Cost | Fixed Cost | Variable Cost | Marginal Cost | Total Revenue | Marginal Revenue |
| 0 | $62 | $62 | - | - | $0 | - |
| 10 | $90 | $62 | $28 | $2.80 | $60 | $6.00 |
| 20 | $110 | $62 | $48 | $2.00 | $120 | $6.00 |
| 30 | $126 | $62 | $64 | $1.60 | $180 | $6.00 |
| 40 | $144 | $62 | $82 | $1.80 | $240 | $6.00 |
| 50 | $166 | $62 | $104 | $2.20 | $300 | $6.00 |
| 60 | $192 | $62 | $130 | $2.60 | $360 | $6.00 |
| 70 | $224 | $62 | $162 | $3.20 | $420 | $6.00 |
| 80 | $264 | $62 | $202 | $4.00 | $480 | $6.00 |
| **90** | $324 | $62 | $262 | **$6.00** | $540 | **$6.00** |
| 100 | $404 | $62 | $342 | $8.00 | $600 | $6.00 |

Table 8.14

[5](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-8#ch08mod02_sques03-solution).

Explain in words why a profit-maximizing firm will not choose to produce at a quantity where marginal cost exceeds marginal revenue.

[6](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-8#ch08mod02_sques04-solution).

A firm’s marginal cost curve above the average variable cost curve is equal to the firm’s individual supply curve. This means that every time a firm receives a price from the market it will be willing to supply the amount of output where the price equals marginal cost. What happens to the firm’s individual supply curve if marginal costs increase?

[7](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-8#ch08mod03_sques01-solution).

If new technology in a perfectly competitive market brings about a substantial reduction in costs of production, how will this affect the market?

[8](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-8#ch08mod03_sques02-solution).

A market in perfect competition is in long-run equilibrium. What happens to the market if labor unions are able to increase wages for workers?

[9](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-8#ch08mod04_sques01-solution).

Productive efficiency and allocative efficiency are two concepts achieved in the long run in a perfectly competitive market. These are the two reasons why we call them “perfect.” How would you use these two concepts to analyze other market structures and label them “imperfect?”

[10](http://openstax.org/books/principles-microeconomics-3e/pages/chapter-8#ch08mod04_sques02-solution).

Explain how the profit-maximizing rule of setting P = MC leads a perfectly competitive market to be allocatively efficient.