## Questions for review (page 363)

1 The government has the power to regulate mergers between firms because of competition laws such as the Trade Practices Act. Firms might want to merge to increase operating efficiency and reduce costs, something that is good for society, or to gain monopoly power, which is bad for society.
2 When regulators tell a natural monopoly that it must set price equal to marginal cost, two problems arise. The first is that, because a natural monopoly has a constant marginal cost that is less than average cost, setting price equal to marginal cost means that the price is less than average cost, so the firm will lose money. The firm would exit the industry unless the government subsidised it, but getting revenue for such a subsidy would cause the government to raise other taxes, increasing their deadweight loss. The second problem is that it gives the monopoly no incentive to reduce costs.
3 Resale price maintenance occurs when a wholesaler sets a minimum price that retailers can charge. This might seem to be anticompetitive because it prevents retailers from competing on price. But that's doubtful because: (1) if the wholesaler has market power, it can exercise such power through the wholesale price; (2) wholesalers have no incentive to discourage competition among retailers since doing so reduces the quantity sold; and (3) maintaining a minimum price may be valuable so retailers provide customers with good service.
4 A firm trying to use predatory pricing to eliminate a competitor could face a tricky situation. For a price war to drive out a rival, prices have to be driven below cost. This is likely to spur demand and it is possible that the firm will suffer large losses.
5 Tying can be used to raise profits as it is a form of price discrimination. If different buyers value the two tied products differently then tying allows the seller to increase profit by charging a combined price closer to the buyers' total willingness to pay.

Tying remains a controversial business practice as there are arguments that it can be used to extend market power in one market to another market.
6 Rules that create transparent pricing may make cartels easier to sustain. With transparent pricing any cheating on the cartel is easier to uncover and punish effectively. The prospect of few benefits and substantial costs from cheating will tend to make it easier for cartels to maintain discipline with transparent pricing.

## Problems and applications (page 363)

1 a Long-distance phone service was originally a natural monopoly because installation of phone lines across the country meant that one firm's costs were much lower than if two or more firms did the same thing.
b With satellites, the cost is no different if one firm supplies them or if many firms do so.
c It is efficient to have competition in long-distance phone service and regulated monopolies in local phone service because local phone service remains a natural monopoly (being based on land lines) while long-distance service is a competitive market (being based on satellites).
2 a Regulators might believe that forcing a monopoly to charge price equal to average cost is a good outcome because the monopolist will earn zero economic profit yet not want to exit the industry. This price regulation does not maximise social welfare as it leads to deadweight losses, because the monopolist's price does not reflect the marginal cost of producing the good. In addition to the deadweight losses this form of regulation may give the regulated firm an incentive to misrepresent its costs.
b Average cost pricing gives a monopolist no incentive to reduce costs. The monopolist knows that it will not benefit from reduced costs.
c Price cap regulation allows the regulated firm to keep all of the benefits from lower costs for a fixed period of time. This is more encouraging of innovation that simple average cost pricing.
3 Though Britney Spears has a monopoly on her own concerts, there are many other singers in the market. If she was to raise the concert price too much, people would substitute to other singers and other forms of entertainment. So there is no need for the government to regulate the price of her concerts.
4 a The decision matrix for this game is:
Braniff's Decision17.1 below.

|  |  | Braniff's Decision17.1 below. |  |
| :---: | :---: | :---: | :---: |
|  | Price $\$ 100$ | Price $\$ \mathbf{2 0 0}$ |  |
|  | Price | Low profits for Braniff | Very low profits for Braniff |
| American's | $\mathbf{\$ 1 0 0}$ | Low profits for American | High Profits for American |
| Decision | Price <br>  $\mathbf{\$ 2 0 0}$ | High profits for Braniff <br> Very low profits for <br> American | Medium profits for Braniff <br> Medium profits for |
|  |  | American |  |

b If Braniff sets a low price, American will set a low price. If Braniff sets a high price, American will set a low price. So American has a dominant strategy to set a low price. If American sets a low price, Braniff will set a low price. If American sets a high price, Braniff will set a low price. So Braniff has a dominant strategy to set a low price. Since both have a dominant strategy to set a low price, the Nash equilibrium is for both to set a low price.
c A better outcome for the airlines would be for both airlines to set a high price; then they would both get higher profits. But that outcome could only be achieved by cooperation, that is, by colluding. If that happened, consumers would lose because prices would be higher and quantity would be lower.
5 a The deadweight loss associated with this oligopoly is the area A in Figure 17.1 below, the area below the demand curve and above the marginal cost curve between $\mathrm{Q}=1 \mathrm{M}$ and $\mathrm{Q}=1.3 \mathrm{M}$.

Figure 17.1

b The deadweight loss will change to area B as shown in Figure 17.2.
Figure 17.2


An estimate of the size of the change in deadweight loss is the area of B less the area of A $=1 / 2(1.3-0.9)(60-20)-1 / 2(1.3-1)(50-20)=3.5 \mathrm{M}$
c The cost savings generated by the merger are $10 \times 0.35=3.5 \mathrm{M}$. This assumes that none of the decrease in industry quantity is from the merged Allcar and Bootstone, who now have a lower marginal cost than the other producers. That is, the merged Allcar and Bootstone continue to produce 350000 tyres per year.
The total size of these cost savings would be directly affected by any change in quantity produced by the merged Allcar and Bootstone. For example, the reduction in marginal cost they achieve may be due to the retirement of more expensive capacity. The merged group may reduce its quantity produced as part of the industry decrease in production. Or the change in cost position of the merged group may allow it to try and steal more market share from the other producers, increasing the size of their cost savings.
d The estimated increase in deadweight loss is exactly offset by the cost savings made by the merged entity. This outcome would change if the merged entity changes its quantity produced.
6 It is likely that pricing below marginal cost would be predatory pricing rather than simply vigorous competitive pricing. Firms that are pricing below marginal cost are not maximising profit, as they are making a loss on items priced this way. The firm could choose not to produce units that are priced below marginal cost and its profits would increase. So a profitmaximising firm would only price below marginal cost if it expected to drive the rival firm out and be able to recoup its losses then.

It is possible that a firm might set a price below marginal cost but not be predatory pricing. For example a firm could use a temporarily very low price as a form of advertising to raise awareness of its product. A firm could be temporarily cash constrained and need to raise cash in a hurry. A firm could be simply making a mistake and mispricing the product. None of these situations would be likely to continue for long as the firm would be losing money.
7 Bundling could be good for consumers and business. For consumers it can allow a saving versus the purchase of items separately. It can also make consumers more confident that the parts of the bundle will work together than if they were purchased separately. Businesses might benefit from the price discrimination possibilities of bundling and it may actually be cheaper to produce and deliver many items as bundles rather than as separate offerings. One situation where bundling could create competition concerns is when a firm has a monopoly in a product and uses bundled prices to extend that market power into a complementary product. For complementary products, competitors may not be able to match the bundled price as this would result in a return below their marginal cost.
8 a Having the petrol prices easily visible made it easier for cartel members to monitor each other, making cheating on the cartel more difficult to hide.
b Banning the advertising of petrol prices might not stop this sort of collusion, although it would make it more difficult for cartel members to detect and punish any cheating by other cartel members.
c The chief benefit of banning the advertising of petrol prices is that it would reduce the ability of a cartel to monitor itself, making the survival of cartels less likely. The costs of such a policy are that customers would find it harder to shop around for the best deal.

