Chapter 1
Cost Behaviour and Contribution
Answer to End of Chapter Exercises

Q 1.2 $\dfrac{£40,000}{£5}$ =8,000 units

Margin of safety = $\dfrac{12,000-8,000}{12,000}$ = 33.30%

Q 1.3 Contribution Widget £5 x 9/11 £4.09
contribution Didget £6 x 2/11 £1.09
£5.18

B.E. Point $\dfrac{40,000}{5.18}$ = 7722 units

Margin of safety $\dfrac{11,000-7722}{11,000}$ = 29.80%

Q1.4

i)   B.E. Point 1,000 shirts and margin of safety = 33.3%

ii)   1,400 shirts

iii) The contribution on existing sales = £5 per shirt x 1,500 shirts =
£7,500

The contribution given a new price = £4 per shirt x 1,900 shirts =
£7,600.

Therefore assuming that fixed costs and other assumptions remain the same it would be worthwhile reducing the price as the contribution increases by £100.

Q 1.5

i) B.E. point $\dfrac{£60,000}{£9}$ = 6667 units

Margin of safety = $\dfrac{12,000-6667}{12,000}$ = 44.44%

ii) $\dfrac{£80,000}{£9}$ = 8,889 units

iii) old contribution 9 x 12,000 = £108,000
new contribution (19.5-13) x 14,000 = £91,000

New proposal is not worthwhile

Q 1.6 i)

	If manual process	if leased
Contribution per unit	£7	£10
sales units	10,000	10,000
Total contribution	£70,000	£100,000
Fixed cost	£40,000	£60,000
Profit	£30,000	£40,000

ii) B.E. point $\dfrac{£40,000}{£7}$ 5714 units $\dfrac{£60,000}{£10}$ 6000 units

Margin of safety = $\dfrac{10,000 - 5,714}{10,000}$ = 42.9% $\dfrac{10,000 - 6,000}{10,000}$ = 40%

iii) Given the expected sales volume, it would be better to lease the machine.
The break-even point is marginally lower with the manual system.