Battery Consumption

Battery Capacity

C=xT

where C=capacity, x = amps, T = time

Power Consumption

Examples

Expresso Machine

Power Consumption	1400 w
Time	10 min
Watt Hours	= 1400 x 10/60 = 233 wh / 0.85 (efficiency) = 275 wh
Amp Hours P=IV I=P/V	= 275 wh / 12v = 23 Ah
How long will it run on a 80Ah battery?	= C / I = C / (P/V) = 80 Ah / (1400w / 12v) = 0.68 hours = 40 mins

Phillips Speaker

Power Consumption	10w
Currnet (I = P/V)	=10w / 12v = 0.8A
How long will it run on a 80Ah battery?	= C / I = 80 Ah / 0.8A = 100 hours = 4.16 days
How long using 4x 18650 2S2P (7.4v) C = 2 x 2Ah = 4Ah I = P / V I = 10w / 7.4v I = 1.35 A	= C / I = 4 Ah / 1.35 A = 3 hours