**Break-Even Analysis**

Joe is a voluntary club administrator and he has the responsibility to organise a sporting event.

This event requires the expenditure of the following amounts:

|  |  |
| --- | --- |
| Venue Hire | $400.00 |
| Advertising and Promotion Costs | $300.00 |
| Trophies | $200.00 |
| Telephone, Postage and Stationery | $100.00 |
| **Total Fixed Costs** | $1,000.00 |

These amounts will be spent no matter how many people turn up to the event, and therefore they are called **Fixed Costs**.

At event, however, there will be other costs which will be **dependant** upon the number of people who turn up and participate. These costs are as follows:

|  |  |
| --- | --- |
| Each competitor will receive | **each** |
| Food and drink | $10.00 |
| Hat | $5.00 |
| **Variable Costs per Competitor** | **$15.00** |

These costs are referred to as **variable costs** because the amount of cost will **vary** with the number of competitors.

Joe is worried about how many competitors he needs to break-even if he charges a competition entry price of $20.00 per participant. He wants to calculate the minimum number of participants he needs so that the event does not lose money.

The term break-even means that all [event costs](http://www.leoisaac.com/evt/top080.htm) will just be covered by all event income.

This problem is an every-day problem for businesses of all types but fortunately it is not a difficult one.

In solving this type of problem it is necessary to distinguish between **fixed** and **variable** costs (as above). This is how Joe calculates the solution:

|  |  |
| --- | --- |
|  | |
| Competition Entry Fee | $20.00 |
| **less** |  |
| Variable Costs per Competitor | $15.00 |
| **Contribution** of each Competitor  towards Fixed Costs | $5.00 |
|  | |
| Total Fixed Costs | $1,000 |
| divided by Contribution | $5.00 |
| **No of competitors required is 1000/5 = 200** | |

**The answer is 200 competitors!**

The above a solution is a commonsense way of putting it but if you would like a formula this one is an easy one to remember:

|  |  |
| --- | --- |
| Formula for Break-Even Point | **Fixed Costs**  **Price - Variable Costs** |
|  |  |
| Don't forget that **(Price - Variable Costs) = Contribution** | |