

MY AMAZON GUY

These are all arithmetical formulas, relatively simple, but they play an important role determining the success of a seller.

Equation 1 . [Individual Account](#)

$$\text{Sales Price} > \frac{\text{Item Cost} + \text{Shipping Credits} + \$0.99 + \text{Amazon Referral Fee} + \text{Others}}{\text{Profit Margin}}$$

Equation 2. [Professional Account](#)

$$\text{Sales Price} > \frac{\text{Item Cost} + \text{FBM Shipping Cost} + \frac{\$39.99}{\text{Number of total sales}} + \text{Amazon Referral Fee} + \text{Advertismeent} + \text{Others}}{\text{Profit Margin}}$$

Equation 3 . [FBA](#)

$$\text{Sale price} > \frac{\text{FBA Item Cost} + \text{Shipping to Amazon} + \text{Selling Plan} + \text{FBA Fees} + \text{Amazon Referral Fee} + \text{Advertismeent} + \text{Others}}{\text{Profit Margin}}$$

Equation 4 . [Report Payments](#)

$$\text{Product Charges} + \text{Shipping} + \text{Tax} + \text{Promo Rebates} + \text{Other} + \text{Refunded Expenses} > \text{Refunded Sales} + \text{Promo Rebates} + \text{Amazon Fees} + \text{FBA Fees} + \text{Cost of Advertising} + \text{Shipping Charges} + \text{Others}$$

Equation 5 . [Pre-Fulfillment Cancellation Rate](#)

$$\frac{\text{Canceled orders during the last 7 days}}{\text{Total sales of last 7 Days}} * 100 < 2.5\%$$

Equation 6 . [Late Shipment Rate](#)

$$\frac{\text{Orders shipped after the scheduled date during the last 30 days}}{\text{Total sales of last 30 Days}} * 100 < 4\%$$

Equation 7 . [Valid Tracking Rate \(VTR\)](#)

$$\frac{\text{Orders marked as shipped without a Valid Tracking Number during the last 30 days}}{\text{Total sales of last 30 Days}} * 100 < 5\%$$

Equation 8 . [Order Defect Rate \(ODR\)](#)

$$\frac{\text{Negative feedback} + \text{AZ Claims} + \text{Chargeback Claims}}{\text{Total sales of last 60 Days}} * 100 < 1\%$$

Equation 9 . [Negative Customer Experience \(NCX\)](#) rate, this one is an actual equation.

$$\frac{\text{Number of orders per ASIN where buyer reported issues during the last 30 days}}{\text{Total orders per ASIN of during the last 30 days}} = \text{NCX Rate}$$

Equation 10 . Sell Through Rate

$$\text{Sell Through Rate} = \frac{\text{Total FBA units sold during the last 90 days}}{\text{Average number of FBA units in stock during the last 90 days}}$$

a) **FBM Minimum profitable Sales Price for individual and professional accounts** . The first three (in)equations determine the Sale Price at which products should be offered. They share many common variables, though some are exclusive for each equation.

Equation 1 . [Individual Account](#)

$$\text{Sales Price} > \frac{\text{Item Cost} + \text{Shipping Credits} + \$0.99 + \text{Amazon Referral Fee} + \text{Others}}{\text{Profit Margin}}$$

Equation 2. [Professional Account](#)

$$\text{Sales Price} > \frac{\text{Item Cost} + \text{FBM Shipping Cost} + \frac{\$39.99}{\text{Number of total sales}} + \text{Amazon Referral Fee} + \text{Advertisement} + \text{Others}}{\text{Profit Margin}}$$

Equation 3 . [FBA](#)

$$\text{Sale price} > \frac{\text{FBA Item Cost} + \text{Shipping to Amazon} + \text{Selling Plan} + \text{FBA Fees} + \text{Amazon Referral Fee} + \text{Advertisement} + \text{Others}}{\text{Profit Margin}}$$

Item Cost : common to Individual and Professional Accounts Selling FBM. It is the cost of the item in the location from which is being fulfilled, including additional packaging, shipping label, etc.

[Shipping Credits](#): applies only to individual plan FBM. Shipping Credits may not cover the actual cost of shipping, it is up to the sellers to determine if they are undercharging for shipping. As a general rule (though not axiomatic) it's very difficult to sell items in the Individual Plan for under \$10. It also probably isn't worth the hassle, as sellers in the Individual Plans are expected to sell fewer than 40 units/month. Amazon is a complex platform that (in most cases) costs more to operate than the profit that \$400 (total sales)/month represents.

\$0.99: the per unit cost of the individual plan.

FBM Shipping Cost : applies only to professional plan. For many items the *Shipping Cost* will represent more than 20% of the *Sales Price* . Depending on the [shipping template]

(https://sellercentral.amazon.com/gp/help/help.html?itemID=G201834090&language=en_US), the customer can see:

Free Shipping: the *Shipping Cost* is included in the *Sales Price* and it is not directly shown to the buyer. The cost of the shipping is determined by the carrier. Shipping can be bought through Amazon or outside of Amazon.

Customer pays for shipping: either a fixed amount or a variable amount per weight. If this is the case, then value of *Shipping Cost* in the equation 2 changes to

$$\text{Shipping Cost} = \text{Actual Shipping Cost} - \text{Amount Paid by Customer}$$

If the *Actual Shipping Cost*, determined by the carrier and charged to the order, is bigger than the *Amount Paid by Customer*, the *Shipping Cost* will be a “positive” value, meaning that the actual *Sales Price* needs to increase for the seller to turn a profit. If the *Actual Shipping Cost* is smaller than the *Amount Paid by Customer*, the *Shipping Cost* will be “negative”, meaning that the *Sales Price* does not have to compensate for losses in the *Shipping Costs*.

$\$39.99/(\text{number of total sales})$: applies only for professional plan. The per unit cost of the Professional Plan.

[Amazon Referral Fee₄](#), applies to individual, professional plan and FBM and FBA. It is dictated by the category and the shipping template. The Referral Fee will be calculated over the *Sales Price*. In other words, it considers both the *Item Cost* and the *Shipping Cost*. This is particularly prevalent in cheap products. For instance, for an item that sales for \$5, but has a shipping cost of \$10, the *Referral Fee* will be calculated over \$15, not \$5.

Others: applies to individual, professional plan and FBM and FBA. Includes returns, refunds, lost or damaged packages, etc. This value can only be fine-tuned though experience, but can be calculated as:

$$\text{Others} \geq \text{Sales Price} * \frac{\text{Returns} + \text{Refund} + \text{Unsellable Units}}{\text{Total Units Sold}}$$

Profit Margin: applies to individual, professional plan and FBM and FBA. If for instance a seller wants to make a profit of 30% it must divide all the sum of all the costs by $(1 - 30\% = 70\% = 0.7)$

FBA Item Cost: the cost of the item in the location from which is being shipped to Amazon, including additional packaging, pallets, shipping labels, FBA Prep charges, etc.

Shipping to Amazon: transportation to Amazon, accounting for additional charges including customs and other.

Selling Plan: either \$0.99 per sale if individual plan, or $\$39.99/(\text{total sales})$ for professional plan.

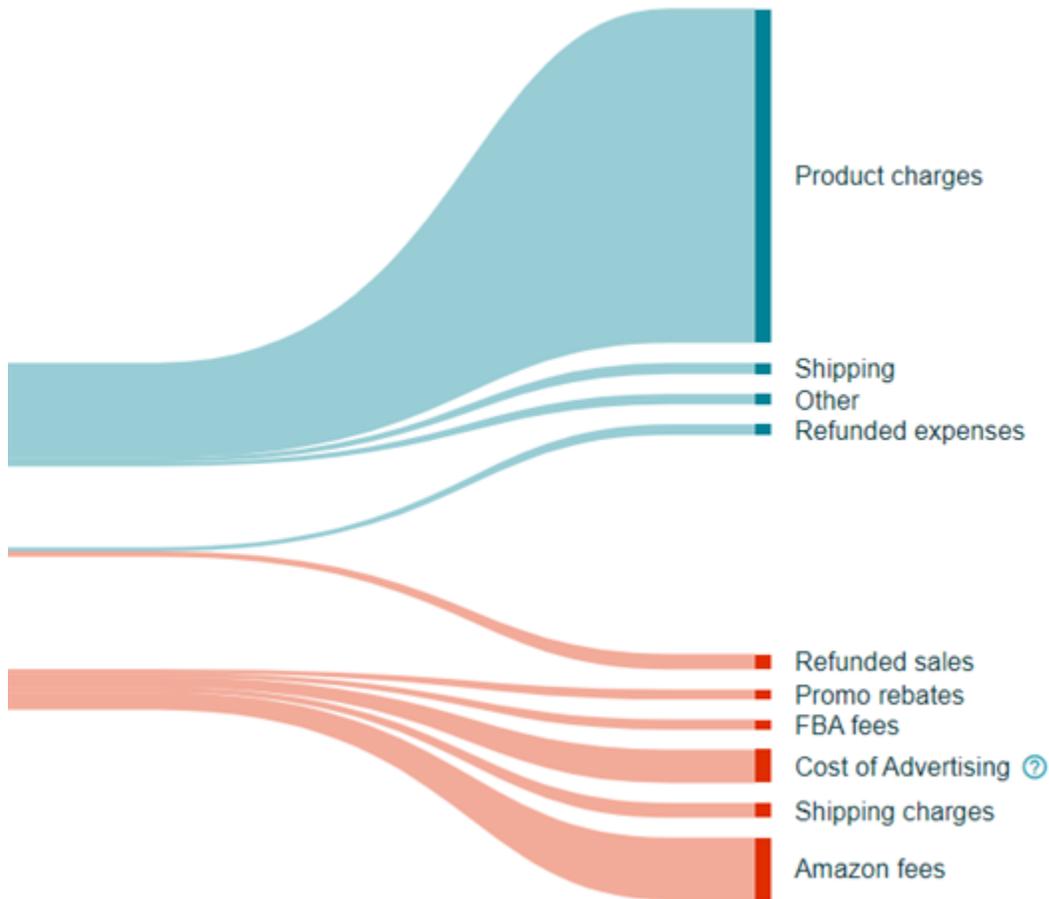
FBA Fees: can be determined from the [Revenue Calculator Too \(RCT\)](#). I recommend adding an additional surcharge of 15% to whichever value the RCT determines.

Advertisement: applies only to professional plan. The per-unit cost of advertisement is calculated as:

$$\text{Cost of Advertisement per unit} = \frac{\text{total Advertisement invested per ASIN}}{\text{Number of sales of the ASIN}}$$

b) Reports Payments

The graph from Amazon can look something like this:



Amazon does a good work explaining what everything is [here](#)¹³, if there are “other” charges in the expenses, they can also refer to shipping corrections if the shipping was bought through Amazon.

This is likely the simplest of all the inequations, but it helps determine the overall profitability of the operation. In short, the expected result must be Blue>Red, though it’s a bit more complicated than that.

Equation 4 . [Report Payments](#)

$$\frac{\text{Product Charges} + \text{Shipping} + \text{Tax} + \text{Promo Rebates} + \text{Other} + \text{Refunded Expenses}}{\text{Refunded Sales} + \text{Promo Rebates} + \text{Amazon Fees} + \text{FBA Fees} + \text{Cost of Advertising} + \text{Shipping Charges} + \text{Others}} >$$

The only thing to remember when looking at this graph is that the profitability of the products is assumed. In other words, the chart may indicate Blue>Red and the seller may be losing money because the *Sale Price* of a product was calculated wrongly.

Please note that this report also includes the *Beginning Balance* and the *Account Level Reserve* . Those values however are not represented on the graph.

c) **Account Health**, all the inequations of this section are calculated over a rolling average of a given number of days. They are extremely simple and represent nothing more than the division of sums. However, as they work over a rolling average, a seller that suffers a “ding” to their Account Health needs to understand how future sells will affect the behavior of these inequations.

Equation 5 . [Pre-Fulfillment Cancellation Rate](#)

$$\frac{\text{Canceled orders during the last 7 days}}{\text{Total sales of last 7 Days}} * 100 < 2.5\%$$

Equation 6 . [Late Shipment Rate](#)

$$\frac{\text{Orders shipped after the scheduled date during the last 30 days}}{\text{Total sales of last 30 Days}} * 100 < 4\%$$

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Equation 9 . [Negative Customer Experience \(NCX\)](#) rate, this one is an actual equation.

$$\frac{\text{Number of orders per ASIN where buyer reported issues during the last 30 days}}{\text{Total orders per ASIN of during the last 30 days}} = \text{NCX Rate}$$

As said before, because equations 5 through 9 are calculated over rolling averages, they change daily.

The best way to mitigate “dings” to Account Health is by selling more units. However, if there are fewer sales after the “ding” than during the previous period, all the rates are going to increase. Fewer sales during a period adds to smaller denominators, which in turn cause higher rates.

For instance, if a seller sells 100 items from Monday to Sunday, and then cancels 1 item, the Pre-Fulfillment Cancellation rate will be of 1% as $1/100=0.01$. If during the next 7 days the seller only sells 50 items but doesn't cancel any orders, by the end of the week the Pre-Fulfillment Cancellation rate will have increased to 2% as $1/50=0.02$. By the following Monday (8th day after the cancellation) the Pre-Fulfillment Cancellation rate will be of 0% as $0/50=0$.

This example applies to equations 5-9, adapting the timeframe and the motive for each case.

There are additional equations that relate to the Account's Health, but IMO these 5 are the most important.

d) Inventory Performance Index (IPI): the formula for the IPI is not public, and just like the formula of the Buy Box, sellers don't have access to the algorithm that determines it. All that is (empirically) suspected is that the Sell Through Rate plays a very important part determining the IPI.

Equation 10 . Sell Through Rate

$$\text{Sell Through Rate} = \frac{\text{Total FBA units sold during the last 90 days}}{\text{Average number of FBA units in stock during the last 90 days}}$$

This seemingly simple equation can get complicated depending on how many different ASINs a seller has in stock. This equation can become difficult to calculate, as sales are expected to be dynamic. Strictly speaking, the equation should read as follows:

$$\text{Sell Through Rate} = \frac{\sum_{1}^n (\sum_{-89}^0 (\text{Daily sales of ASIN } (n) \text{ for day } (i)))}{\frac{\sum_{1}^n (\sum_{-89}^0 (\text{Daily Inventory of ASIN } (n) \text{ for day } (i)))}{90 \text{ days}}}$$

Where 1-n counts the number of different ASINs stored across Amazon Fulfillment Centers, and "i" is any given day over the last 90 days. Again, there's little point in trying to manually calculate this equation. It's more important to understand it than to solve it.

The result will always be any positive number starting at 0 (if sales during the period are 0). This rating is measured from 0-1 as "poor", 1-2 as "fair", 2-7 as "good", and +7 as "excellent".

Sell Through Rate measures how effectively inventory is rotating, accounting for all the different ASINs sold through FBA and stored in Amazon Fulfillment Centers.

For instance, let's assume an item that sells 1 unit daily. Said item will sell a total of 90 units during a 90-day span. During the 90 days, 3 different shipments, each of 30 units are sent at a monthly basis. Given the linearity of the example, the *Average Daily Inventory* can be calculated as:

$$\text{Average Daily Inventory} = \frac{\text{Initial Inventory} - \text{Final Inventory}}{2} = \frac{30 - 1}{2} = 14.5 \text{ units}$$

If we wanted to calculate the *Average Daily Inventory* using the formula indicated previously, it would look something like:

$$\text{Average Daily Inventory} = \frac{\sum_{i=1}^{30} 30 - i \text{ (units * day)}}{30 \text{ days}} = \frac{\sum 29 + 28 + \dots + 2 + 1 \text{ (units * day)}}{30 \text{ days}} =$$

$$\text{Average Daily Inventory} = \frac{435 \text{ (units * day)}}{30 \text{ days}} = 14.5 \text{ units}$$

The *Sell Through Rate* will be:

$$\text{Sell Through Rate} = \frac{1 \frac{\text{unit}}{\text{day}} * 90 \text{ days}}{\text{Average Daily Inventory}} = \frac{1 \frac{\text{unit}}{\text{day}} * 90 \text{ days}}{14.5 \text{ unit}} = \frac{90 \text{ units}}{14.5 \text{ unit}} = 6.2$$

One of the most interesting aspects of the *Sell Through Rate* is that it is not affected by an inventory of 0 units. This can be seen through the same example: an item that sells 1 unit daily, but only 2 shipments of 30 units are received by Amazon. One for the first month, and one for the second month. The third shipment is delayed on the receiving dock, and it's not processed for 30 days. In this case, the daily average of each month would be: 14.5 units for the first month, 14.5 units for the second month, and 0 units for the third month:

$$\begin{aligned} \text{Average Daily Inventory} &= \frac{14.5 \text{ units 1st month} + 14.5 \text{ units 2nd mont} + 0 \text{ units 3rd month}}{3} \\ &= \frac{29 \text{ units per month}}{3} = 9.66 \text{ units} \end{aligned}$$

The *Sell Through Rate* would be the total sales of the 90 days divided by the *Daily Average Inventory*. As the last 30 units did not arrive, the total sales are of just 60 units:

$$\text{Sell Through Rate} = \frac{\text{Total Sales}}{\text{Average Daily Inventory}} = \frac{60 \text{ units}}{9.66 \text{ units}} = 6.2$$

If a seller wanted to prevent a listing from being Out of Stock, and did something radical, like increasing the price of the last unit of available inventory, the *Sale Through Rate* would decrease. In this scenario the seller would sell 30 units during the first 30 days, 29 units during the second 30 days, and 0 units during the final 30 days, for total sales of 59 units. The *Daily Average Inventory* for each month would be 14.5 for the 1st 30 days, 14.5 for the 2nd 30 days, and 1 for the last 30 days. In other words:

$$\begin{aligned} \text{Average Daily Inventory} &= \frac{14.5 \text{ units 1st month} + 14.5 \text{ units 2nd month} + 1 \text{ units 3rd month}}{3} \\ &= \frac{30 \text{ units per month}}{3} = 10 \text{ units} \end{aligned}$$

The *Sell Through Rate* for this scenario would be:

$$\text{Sell Through Rate} = \frac{\text{Total Sales}}{\text{Average Daily Inventory}} = \frac{59 \text{ units}}{10 \text{ units}} = 5.9$$

The only ways to improve the *Sell Through Rate* are increasing *Total Sales* or decreasing the *Average Daily Inventory* .

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