

1RM CALCULATOR

REPETITIONS	% of 1RM
1	100%
2	97%
3	94%
4	92%
5	89%
6	86%
7	83%
8	81%
9	78%
10	75%
11	73%
12	71%
13	70%
14	68%
15	67%
16	65%
17	64%
18	63%
19	61%
20	60%

The 1RM Calculator

These calculations are widely used as a tool to give you a **pretty close** calculation on how to figure out your load amount based on your rep amount. Your 'RM' means **repetition max**. Your max means that within a specific rep amount you reaching your **maximum physical capacity** within that rep amount.

The intensity behind performing a 1 repetition max lift can be quite intense and dangerous. That is where this calculator can come in handy if you haven't reached that point where you are comfortable performing lifts within the 95-100% RM range.

How It Works

There are many examples of formulas that can work for calculating your 1RM. For this worksheet we are going to use a formula created by Matt Brysycki as it has been shown to be the most accurate:

$$1RM = \frac{w}{1.0278 - 0.0278r}$$

W = weight
r = rep amount

*Brzycki, Matt (1998). *A Practical Approach To Strength Training*. McGraw-Hill.

Example

An individual performs a lift where they reach their maximum physical capacity at 12 repetitions. They achieved the lift using 85lb. They want to know how much weight to use doing the same exercise performing the movement in 8 repetitions.

For this we will need to calculate our 1RM and use that information against the chart on the first page. We can see that 8 reps are 81% of our calculated 1RM. We can then find out what the weight of 8 repetitions will be.

Equation

$$1RM = \frac{w}{1.0278 - 0.0278r}$$

Equation Using Variables

$$\begin{aligned} 1RM &= \frac{85}{1.0278 - 0.0278(12)} \\ &= 120lb \end{aligned}$$

Equation Using 1RM to Find The 8RM (81%)

$$120lb \times 81\% = 97lb$$

It will take 97lb to reach 8RM for the exercise.