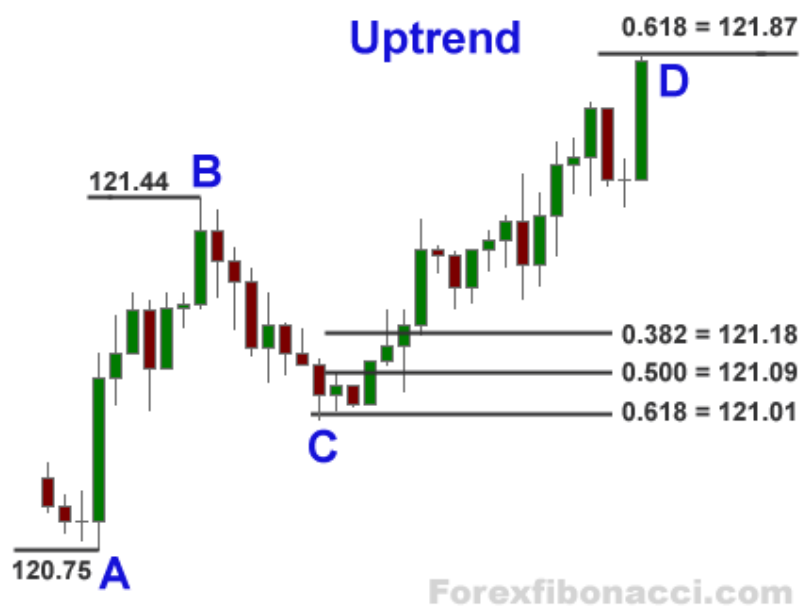


How to calculate Fibonacci retracement and extension levels

Three most used Fibonacci retracement levels are 0.382 or 38.2%, 0.500 (50%) and 0.618 (61.8%).

Three most used Fibonacci extension levels are 0.618, 1.000 and 1.618. Also 1.382 extension can be applied as well.

Let's take a look at the next picture:



In the example above we are in the uptrend. Lowest swing — point A — is 120.75; highest swing — point B — 121.44.

To calculate retracement levels and enter Long at some point C we do next:

Calculations for Uptrend and Buy order:

$$B - A = ?$$

$$121.44 - 120.75 = 0.69$$

$$0.382 \text{ (38.2\%)} \text{ retracement} = 121.44 - 0.69 \times 0.382 = 121.18$$

$$0.500 \text{ (50.0\%)} \text{ retracement} = 121.44 - 0.69 \times 0.500 = 121.09$$

$$0.618 \text{ (61.8\%)} \text{ retracement} = 121.44 - 0.69 \times 0.618 = 121.01$$

Fibonacci retracement levels formula for an uptrend:

$$C = B - (B - A) \times N\%$$

Now we need to calculate extension levels:

$$0.618 \text{ (61.8\%) extension} = 121.44 + 0.69 \times 0.618 = 121.87$$

$$1.000 \text{ (100.0\%) extension} = 121.44 + 0.69 \times 1.000 = 122.13$$

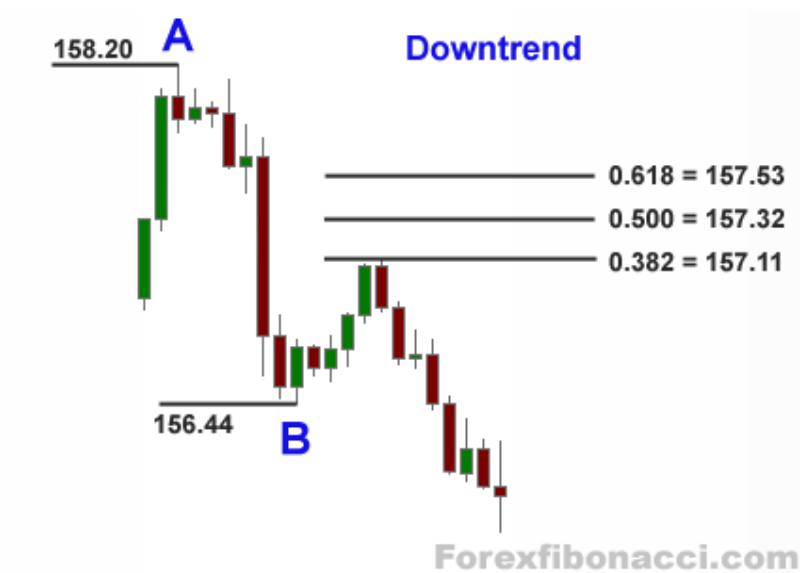
$$1.382 \text{ (138.2\%) extension} = 121.44 + 0.69 \times 1.382 = 122.39$$

$$1.618 \text{ (161.8\%) extension} = 121.44 + 0.69 \times 1.618 = 122.56$$

Fibonacci extension levels formula for an uptrend:

$$D = B + (B - A) \times N\%$$

Our next example is downtrend.



Highest swing — point A — is 158.20; lowest swing — point B — is 156.44.

Calculations for downtrend and Sell order:

$$A - B = ?$$

$$158.20 - 156.44 = 1.76$$

Because of the downtrend we need to **add** to the lowest point B to find retracement.

$$0.382 \text{ (38.2\%) retracement} = 156.44 + 1.76 \times 0.382 = 157.53$$

$$0.500 \text{ (50.0\%) retracement} = 156.44 + 1.76 \times 0.500 = 157.32$$

$$0.618 \text{ (61.8\%) retracement} = 156.44 + 1.76 \times 0.618 = 157.11$$

Fibonacci retracement levels formula for downtrend:

$$C = B + (A - B) \times N\%$$

Now let's find Fibonacci extension levels (downtrend):

$$0.618 \text{ (61.8\%)} \text{ extension} = 156.44 - 1.76 \times 0.618 = 155.35$$

$$1.000 \text{ (100\%)} \text{ extension} = 156.44 - 1.76 \times 1.000 = 154.68$$

$$1.382 \text{ (138.2\%)} \text{ extension} = 156.44 - 1.76 \times 1.382 = 154.01$$

$$1.618 \text{ (161.8\%)} \text{ extension} = 156.44 - 1.76 \times 1.618 = 153.59$$

Fibonacci extension levels formula for downtrend:

$$D = B - (A - B) \times N\%$$