



# MOVING AVERAGE

## Purpose, Uses, and Examples

Trade for  
Good.

A candlestick chart with several moving average lines overlaid. The chart shows price movement over time, with green candles for upward price changes and red candles for downward price changes. The moving averages are represented by smooth, colored lines (yellow, green, orange) that follow the general trend of the price. The background is dark blue.

# What Is a Moving Average (MA)?

A moving average (MA) is a stock indicator commonly used in identify a **trend direction** of a stock, to determine its support and resistance levels.

Moving averages are widely used by investors and traders, and are considered to be important trading signals.

# What Are MA's Used for?

Moving averages are used to understand and profit from the **price movement patterns** of securities and indices.

MA's are used to **detect** if a change in momentum is occurring, the MA give a visual confirmation that a change might be underway.

Trade for  
Good.



# Commonly Used Periods

Depending on the trading objective investors choose different periods of varying lengths to calculate moving averages.

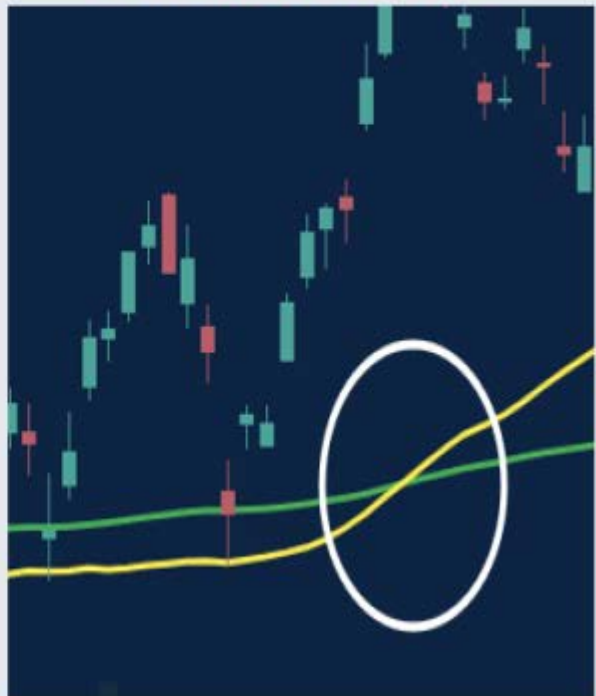
- Shorter moving averages are typically used for **short-term** trading, **20** or **50** bars
- Longer-term moving averages are more suited for **long-term** investors, **200** bars



# Trends - Uptrend

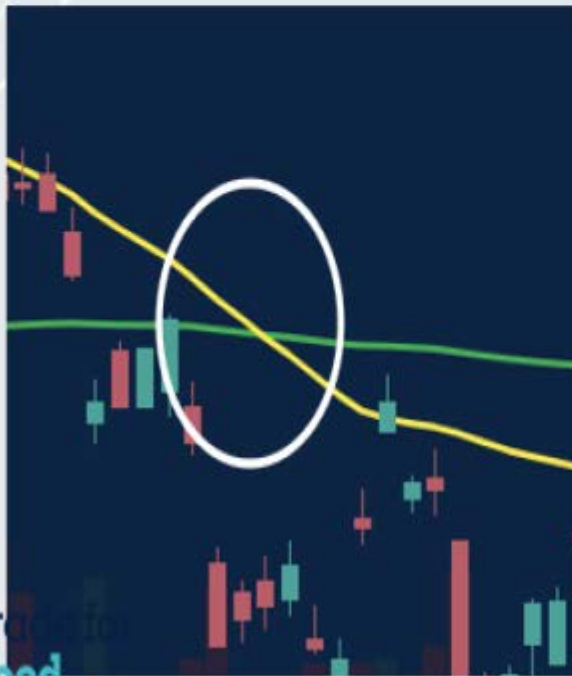
A **rising** moving average indicates that the stock is in an uptrend. A **bullish crossover**

occurs when a short-term moving average **crosses above** a longer-term moving average



# Trends - Downtrend

A **declining** moving average indicates that the stock is in a downtrend. A **bearish**



**crossover** occurs when a short-term moving average **crosses below** a longer-term moving average

# Types of Moving Averages

## Simple Moving Average

Is calculated by; the price of a stock on each bar added together, then divided by the number of bars, to provide an **average price over the number of bars**.

e.g.  $[(20 \text{ sets of prices added together}) / (\text{divided by } 20 \text{ bars})] = \text{SMA}$

# Types of Moving Averages

## Exponential Moving Average (EMA)

Focuses more weight to recent prices, making them **more responsive** to new prices.

The EMA, is the SMA, then calculates a multiplier for weighting or "smoothing".

The formula is:  $[2 / (\text{selected time period} + 1)]$ .



# Types of Moving Averages

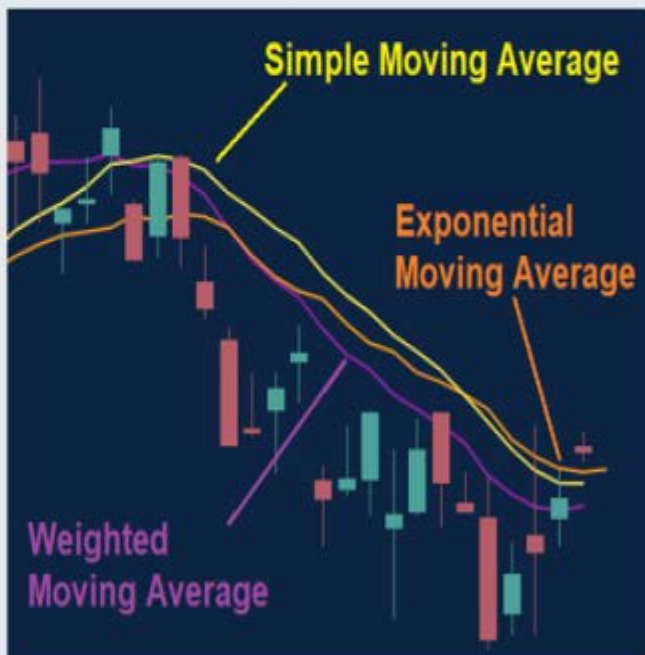
## Weighted Moving Average (WMA)

Assign a heavier **weighting to more current data points**, as they are more relevant than the past ones.

Date	Weighting	Closing Price of BHP
10-Sep-22	5/15	\$38.09
09-Sep-22	4/15	\$36.27
08-Sep-22	3/15	\$37.27
07-Sep-22	2/15	\$37.91
06-Sep-22	1/15	\$36.74
Weighted Average Price:		\$37.31

# SMA vs EMA

As the EMA puts more emphasis on the recent data points, you can see how the EMA and WMA are **more sensitive** to price movements over the 15 bar period.



# What Is a Golden Cross

A golden cross is a chart pattern in which a short-term moving average **crosses above** a long-term moving average. The golden cross is a **bullish breakout**.

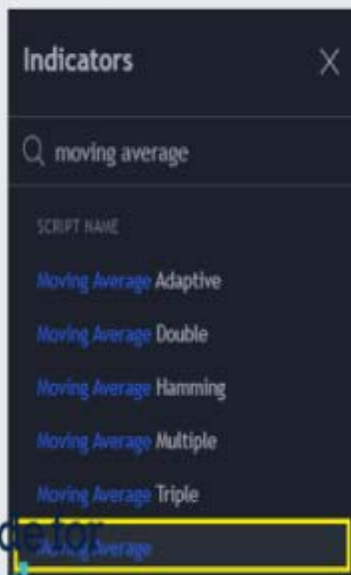


# How Add the MA?

1. In the chart, click on **Indicators**



2. Search and select **Moving Average**



3. To modify, click on the **Cog**, to select the MA type and values

