How to Calculate the Probabilities of Winning the Four JACKPOT TRIPLE PLAY Prize Levels:

JACKPOT TRIPLE PLAY™ numbers are drawn from a set of 46 numbers. Since the order of the items chosen is irrelevant, the applicable probability rule is the formula to determine combinations.

Before calculating the odds for the different prize levels, calculate the total number of combinations possible.

Calculate how many combinations of 6 numbers can be drawn from 46 unique numbers:

The formula is as follows:

$$\frac{46!}{6!\,(46-6)!} = \frac{46*45*44*43*42*41*40!}{6*5*4*3*2*1*40!} = \frac{46*45*44*43*42*41}{6*5*4*3*2*1} = \frac{6{,}744{,}109{,}680}{720} = 9{,}366{,}819$$

where $!$ indicates a factorial, i. e., $n! = n*(n-1)*(n-2)*\ldots*2*1$

Thus, there are 9,366,819 different ways in which 6 numbers can be chosen from a total of 46 unique numbers.

Since a Jackpot Triple Play ticket consists of three possible sets of winning numbers, the next step in calculating the odds is to determine the probability of winning on a single set:

Match all six numbers in a single set *(1 in 9,366,819 odds)*

Calculate the number of ways in which 6 numbers can be chosen correctly out of 6 numbers drawn from 46 unique numbers.

The formula is as follows:

$$\frac{6!}{6!\,(6-6)!} * \frac{(46-6)!}{((46-6)-(6-6))!\,(6-6)!} = \frac{1}{0!} * \frac{40!}{(40-0)!\,0!} = \frac{40!}{40!\,1} = 1$$

(note: 0!=1)

This means that there is only 1 way in which 6 numbers out of 6 numbers drawn from a field of 46 numbers can be chosen correctly.

Thus, there is only 1 chance in 9,366,819 of correctly choosing all six numbers drawn in JACKPOT TRIPLE PLAY in a single set of numbers.

Match five numbers in a single set (1 in 39,028.41 odds)

Calculate the number of ways in which 5 numbers can be chosen correctly out of 6 numbers drawn from 46 unique numbers.

The formula is as follows:

$$\frac{6!}{5!\,(6-5)!} * \frac{(46-6)!}{((46-6)-(6-5))!\,(6-5)!} = \frac{6*5!}{5!\,1!} * \frac{40!}{(40-1)!\,1!} = \frac{6}{1} * \frac{40*39!}{39!\,1} = 6*40 = 240$$

This means that there are 240 different ways in which 5 numbers out of 6 numbers drawn from a field of 46 numbers can be chosen correctly.

Thus, the chances are 240 in 9,366,819 of correctly choosing 5 out of 6 numbers drawn in JACKPOT TRIPLE PLAY in a single set of numbers, which can be reduced to 1 chance in 39,028.41.

Match four numbers in a single set (1 in 800.58 odds)

Calculate the number of ways in which 4 numbers can be chosen correctly out of 6 numbers drawn from 46 unique numbers.

The formula is as follows:

$$\frac{6!}{4!\,(6-4)!} * \frac{(46-6)!}{((46-6)-(6-4))!\,(6-4)!} = \frac{6*5*4!}{4!\,2!} * \frac{40!}{(40-2)!\,2!} = \frac{30}{2} * \frac{40*39*38!}{38!\,2} = 15 * \frac{40*39}{2} = 11,700$$

This means that there are 11,700 different ways in which 4 numbers out of 6 numbers drawn from a field of 46 numbers can be chosen correctly.

Thus, the chances are 11,700 in 9,366,819 of correctly choosing 4 out of 6 numbers drawn in JACKPOT TRIPLE PLAY in a single set of numbers, which can be reduced to 1 chance in 800.58.

Match three numbers in a single set (1 in 47.40 odds)

Calculate the number of ways in which 3 numbers can be chosen correctly out of 6 numbers drawn from 46 unique numbers.

The formula is as follows:

$$\frac{6!}{3!\,(6-3)!} * \frac{(46-6)!}{((46-6)-(6-3))!\,(6-3)!} = \frac{6*5*4*3!}{3!\,3!} * \frac{40!}{(40-3)!\,3!} = \frac{6*5*4}{3*2} * \frac{40*39*38*37!}{37!\,3*2} = 20 * \frac{40*39*38}{6} = 197,600$$

This means that there are 197,600 different ways in which 3 numbers out of 6 numbers drawn from a field of 46 numbers can be chosen correctly.

Thus, the chances are 197,600 in 9,366,819 of correctly choosing 3 out of 6 numbers drawn in JACKPOT TRIPLE PLAY in a single set of numbers, which can be reduced to 1 chance in 47.40.

Since there are three sets of potential winning numbers on a single ticket and at least two of the sets are derived from the Florida Lottery Quick Pick system, there is the potential to have duplicated sets of numbers on a single ticket. Because of this, a ticket could have more than one winning set of numbers. The best way to calculate the odds in this situation is to look at the probability that none of the sets on a ticket will win, then take 1 minus that probability to calculate the chance that at least one set will win.

Match all six numbers at least once on a single ticket (1 in 3,122,273.33 odds)

Since the chance of a single set matching all six numbers is 1 in 9,366,819, the chances of a single set not matching all six numbers are 9,366,818 in 9,366,819. The chances of all three sets not matching all six numbers are

$$\frac{9{,}366{,}818}{9{,}366{,}819} * \frac{9{,}366{,}818}{9{,}366{,}819} * \frac{9{,}366{,}818}{9{,}366{,}819} = \frac{821{,}819{,}128{,}377{,}617{,}495{,}432}{821{,}819{,}391{,}589{,}483{,}931{,}259}$$

Conversely, the chances of at least one set matching six of six numbers are

$$1 - \frac{821{,}819{,}128{,}377{,}617{,}495{,}432}{821{,}819{,}391{,}589{,}483{,}931{,}259} = \frac{263{,}211{,}866{,}435{,}827}{821{,}819{,}391{,}589{,}483{,}931{,}259}$$

Thus, the chances are 263,211,866,435,827 in 821,819,391,589,483,931,259 of correctly choosing 6 out of 6 numbers drawn in JACKPOT TRIPLE PLAY at least once on a single ticket, which can be reduced to 1 chance in 3,122,273.33.

Match five of six numbers at least once on a single ticket (1 in 13,009.80 odds)

Since the chances of a single set matching five of six numbers are 240 in 9,366,819, the chances of a single set not matching five of six numbers are 9,366,579 in 9,366,819. The chances of all three sets not matching five of six numbers are

$$\frac{9{,}366{,}579}{9{,}366{,}819} * \frac{9{,}366{,}579}{9{,}366{,}819} * \frac{9{,}366{,}579}{9{,}366{,}819} = \frac{821{,}756{,}222{,}353{,}367{,}722{,}539}{821{,}819{,}391{,}589{,}483{,}931{,}259}$$

Conversely, the chances of at least one set matching five of six numbers are

$$1 - \frac{821{,}756{,}222{,}353{,}367{,}722{,}539}{821{,}819{,}391{,}589{,}483{,}931{,}259} = \frac{63{,}169{,}236{,}116{,}208{,}720}{821{,}819{,}391{,}589{,}483{,}931{,}259}$$

Thus, the chances are 63,169,236,116,208,720 in 821,819,391,589,483,931,259 of correctly choosing 5 out of 6 numbers drawn in JACKPOT TRIPLE PLAY at least once on a single ticket, which can be reduced to 1 chance in 13,009.80.

Match four of six numbers at least once on a single ticket *(1 in 267.19 odds)*

Since the chances of a single set matching four of six numbers are 11,700 in 9,366,819, the chances of a single set not matching four of six numbers are 9,355,119 in 9,366,819. The chances of all three sets not matching four of six numbers are

$$\frac{9,355,119}{9,366,819} * \frac{9,355,119}{9,366,819} * \frac{9,355,119}{9,366,819} = \frac{818,743,657,493,355,150,159}{821,819,391,589,483,931,259}$$

Conversely, the chances of at least one set matching four of six numbers are

$$1 - \frac{818,743,657,493,355,150,159}{821,819,391,589,483,931,259} = \frac{3,075,734,096,128,781,100}{821,819,391,589,483,931,259}$$

Thus, the chances are 3,075,734,096,128,781,100 in 821,819,391,589,483,931,259 of correctly choosing 4 out of 6 numbers drawn in JACKPOT TRIPLE PLAY at least once on a single ticket, which can be reduced to 1 chance in 267.19.

Match three of six numbers at least once on a single ticket *(1 in 16.14 odds)*

Since the chances of a single set matching three of six numbers are 197,600 in 9,366,819, the chances of a single set not matching three of six numbers are 9,169,219 in 9,366,819. The chances of all three sets not matching three of six numbers are

$$\frac{9,169,219}{9,366,819} * \frac{9,169,219}{9,366,819} * \frac{9,169,219}{9,366,819} = \frac{770,898,209,486,850,000,000}{821,819,391,589,483,931,259}$$

Conversely, the chances of at least one set matching three of six numbers are

$$1 - \frac{770,898,209,486,850,730,459}{821,819,391,589,483,931,259} = \frac{50,921,182,102,633,200,800}{821,819,391,589,483,931,259}$$

Thus, the chances are 50,921,182,102,633,200,800 in 821,819,391,589,483,931,259 of correctly choosing 3 out of 6 numbers drawn in JACKPOT TRIPLE PLAY at least once on a single ticket, which can be reduced to 1 chance in 16.14.

Match 3, 4, 5, or 6 numbers at least once on a single ticket *(1 in 15.24 odds)*

To calculate the number of ways in which 3, 4, 5, or 6 numbers can be chosen correctly at least once out of 6 numbers drawn from 46 unique numbers, the chances of each possibility are added together. From the steps above, we have:

$$\frac{263,211,866,390,528}{821,819,391,589,483,931,259} + \frac{63,169,236,116,176,900}{821,819,391,589,483,931,259} + \frac{3,075,734,096,128,770,000}{821,819,391,589,483,931,259} + \frac{50,921,182,102,633,200,000}{821,819,391,589,483,931,259}$$

$$= \frac{54,060,348,646,744,500,000}{821,819,391,589,483,931,259}$$

Thus, the chances are 54,060,348,646,744,500,000 in 821,819,391,589,483,931,259 of correctly choosing 3, 4, 5, or 6 out of 6 numbers in JACKPOT TRIPLE PLAY at least once on a single ticket, which can be reduced to 1 chance in 15.24.

How to Calculate the Probabilities of Winning
the Combo JACKPOT TRIPLE PLAY Prize Levels:

To calculate the odds on the Combo play prizes, we need to know how each situation can occur. The chances for each possibility occurring are calculated and added together to get the total chances for that number of matches occurring on a ticket.

From the steps in the base game above, we know the chances of getting 3, 4, 5, or 6 matches in a single set. For purposes of the Combo play, the chances of getting 0, 1, or 2 matches in a single set are also calculated, using the same formula as above. To recap, we get the following:

Match 6 –   1 in 9,366,819
Match 5 –   240 in 9,366,819
Match 4 –   11,700 in 9,366,819
Match 3 –   197,600 in 9,366,819
Match 2 – 1,370,850 in 9,366,819
Match 1 – 3,948,048 in 9,366,819
Match 0 – 3,838,380 in 9,366,819

As an example of how the calculations are derived, the steps for calculating the chances of matching 4 numbers in the Combo play will be done.

Four occurrences of matching numbers on a single ticket can occur in several ways:

4 matches in set 1, no matches in set 2, and no matches in set 3 (4,0,0)

No matches in set 1, 4 matches in set 2, and no matches in set 3 (0,4,0)

No matches in set 1, no matches in set 2, and 4 matches in set 3 (0,0,4)

3 matches in set 1,   1 match in set 2, and no matches in set 3 (3,1,0)

3 matches in set 1, no matches in set 2,   and 1 match in set 3 (3,0,1)

1 match in set 1,   3 matches in set 2, and no matches in set 3 (1,3,0)

1 match in set 1,   no match in set 2,   and 3 matches in set 3 (1,0,3)

No matches in set 1,   3 matches in set 2,   and 1 match in set 3 (0,3,1)

No matches in set 1,   1 match in set 2,   and 3 matches in set 3 (0,1,3)

2 matches in set 1,   2 matches in set 2, and no matches in set 3 (2,2,0)

2 matches in set 1, no matches in set 2,   and 2 matches in set 3 (2,0,2)

No matches in set 1,   2 matches in set 2,   and 2 matches in set 3 (0,2,2)

2 matches in set 1,   1 match in set 2,   and 1 match in set 3 (2,1,1)

1 match in set 1,   2 matches in set 2,   and 1 match in set 3 (1,2,1)

1 match in set 1,   1 match in set 2,   and 2 matches in set 3 (1,1,2)

The odds for each of these situations is calculated, then they are all added together to determine the chances of matching 4 numbers on a ticket. (Note that they have been

grouped based on patterns of matches. This means we can calculate the odds for just one of the patterns in a group and multiply that by the total number of patterns in the group.)

Thus, for the pattern of matching 0 in two sets and 4 in the other set, using the table above, the chances of this occurring are:

$$\frac{11,700}{9,366,819} * \frac{3,838,380}{9,366,819} * \frac{3,838,380}{9,366,819} = \frac{172,377,983,985,480,000}{821,819,391,589,483,931,259}$$

Since there are three such patterns in this group, this is multiplied by 3 to get:

$$\frac{517,133,951,956,440,000}{821,819,391,589,483,931,259}$$

For the pattern of matching 3 in one set, 1 in another set, and 0 in the other set, using the table above, the chances of this occurring are:

$$\frac{197,600}{9,366,819} * \frac{3,948,048}{9,366,819} * \frac{3,838,380}{9,366,819} = \frac{2,994,451,836,090,624,000}{821,819,391,589,483,931,259}$$

Since there are six such patterns in this group, this is multiplied by 6 to get:

$$\frac{17,966,711,016,543,744,000}{821,819,391,589,483,931,259}$$

For the pattern of matching 2 in two sets and 0 in the other set, using the table above, the chances of this occurring are:

$$\frac{1,370,850}{9,366,819} * \frac{1,370,850}{9,366,819} * \frac{3,838,380}{9,366,819} = \frac{7,213,197,782,249,550,000}{821,819,391,589,483,931,259}$$

Since there are three such patterns in this group, this is multiplied by 3 to get:

$$\frac{21,639,593,346,748,650,000}{821,819,391,589,483,931,259}$$

For the pattern of matching 1 in two sets and 2 in the other set, using the table above, the chances of this occurring are:

$$\frac{1,370,850}{9,366,819} * \frac{3,948,048}{9,366,819} * \frac{3,948,048}{9,366,819} = \frac{21,367,552,744,675,238,400}{821,819,391,589,483,931,259}$$

Since there are three such patterns in this group, this is multiplied by 3 to get:

$$\frac{64,102,658,234,025,715,200}{821,819,391,589,483,931,259}$$

Now that the chances for each pattern occurring have been calculated, they can be added together to determine the total chances of matching 4 numbers on a ticket:

$$\frac{517,133,951,956,440,000}{821,819,391,589,483,931,259} + \frac{17,966,711,016,543,744,000}{821,819,391,589,483,931,259} + \frac{21,639,593,346,748,650,000}{821,819,391,589,483,931,259} + \frac{64,102,658,234,025,715,200}{821,819,391,589,483,931,259}$$

$$= \frac{104,226,096,549,274,549,200}{821,819,391,589,483,931,259}$$

Thus, the chances are 104,226,096,549,274,549,200 in 821,819,391,589,483,931,259 of correctly matching 4 of the winning JACKPOT TRIPLE PLAY numbers on a single JACKPOT TRIPLE PLAY ticket, which can be reduced to 1 chance in 7.88.

This same procedure can be followed to determine the chances of matching each of the possible prize levels on a JACKPOT TRIPLE PLAY Combo play. For the top prize of matching 10 or more, the chances for matching each possible number from 10 to 18 are calculated and then summed together to get the chances for matching 10 or more.