

Compound Probability ... Set 1

Compound Probability Practice

Find the probability.

- 1) A basket contains four apples and eight peaches. You randomly select one piece of fruit and eat it. Then you randomly select another piece of fruit. The first piece of fruit is an apple and the second piece is a peach.
- 2) You roll a fair six-sided die. The die shows an even number or a number greater than three.
- 3) A box of chocolates contains five milk chocolates and eight dark chocolates. You randomly pick a chocolate and eat it. Then you randomly pick another piece. Both pieces are milk chocolate.
- 4) A basket contains four apples and six peaches. You randomly select one piece of fruit and eat it. Then you randomly select another piece of fruit. The first piece of fruit is an apple and the second piece is a peach.
- 5) Your sock drawer has six white socks, six brown socks, and six black socks. You randomly pick a sock and put it on your left foot and then pick another sock and put it on your right foot. You leave the house with a white sock on your left foot and a brown sock on your right foot.
- 6) You roll a fair six-sided die. The die shows a two or a three
- 7) There are eight nickels and eight dimes in your pocket. You randomly pick a coin out of your pocket and place it on a counter. Then you randomly pick another coin. Both coins are nickels.
- 8) There are ten shirts in your closet, six blue and four green. You randomly select one to wear on Monday and then a different one on Tuesday. You wear blue shirts both days.
- 9) A cooler contains twelve sports drinks: five lemon-lime and seven orange. Three of the lemon-lime and five of the orange drinks are cold. The others are still warm. You randomly grab a bottle. It is orange flavored or warm.
- 10) There are five nickels and five dimes in your pocket. You randomly pick a coin out of your pocket and then return it to your pocket. Then you randomly pick another coin. The first coin is a nickel and the second coin is a dime.
- 11) A bag contains four red marbles, five blue marbles, and five yellow marbles. You randomly pick a marble. The marble is red or blue.
- 12) You flip a coin six times. The coin lands heads-up the first three times and then lands tails-up the remaining three times.

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Answers

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1) $\frac{8}{33} \approx 0.242$

2) $\frac{2}{3} \approx 0.667$

3) $\frac{5}{39} \approx 0.128$

4) $\frac{4}{15} \approx 0.267$

5) $\frac{2}{17} \approx 0.118$

6) $\frac{1}{3} \approx 0.333$

7) $\frac{7}{30} \approx 0.233$

8) $\frac{1}{3} \approx 0.333$

9) $\frac{3}{4} = 0.75$

10) $\frac{1}{4} = 0.25$

11) $\frac{9}{14} \approx 0.643$

12) $\frac{1}{64} \approx 0.016$

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- 13) You flip a coin five times. The coin lands heads-up the first two times and then lands tails-up the remaining three times.
- 14) A basket contains four apples, three peaches, and four pears. You randomly select a piece of fruit. It is an apple or a peach.
- 15) A bag contains seven red marbles and eight blue marbles. You randomly pick a marble and then pick a second marble without returning the marbles to the bag. The first marble is red and the second marble is blue.
- 16) A magazine contains twelve pages. You open to a random page. The page number is seven or ten.
- 17) You flip a coin four times and then roll a fair six-sided die three times. The coin lands heads-up every time and the die shows an even number every time.
- 18) A box of chocolates contains five milk chocolates and six dark chocolates. Three of the milk chocolates and two of the dark chocolates have peanuts inside. You randomly select and eat a chocolate. It is a dark chocolate or has no peanuts inside.
- 19) You roll a fair six-sided die twice. The first roll shows a six and the second roll shows a five.
- 20) A bag contains five red marbles and seven blue marbles. You randomly pick a marble and then pick a second marble without returning the marbles to the bag. Both marbles are red.
- 21) You roll a fair six-sided die. The die shows an even number or a number less than four.
- 22) A basket contains three apples, five peaches, and five pears. You randomly select a piece of fruit. It is an apple or a peach.
- 23) There are eleven shirts in your closet, six blue and five green. You randomly select one to wear on Monday and then a different one on Tuesday. You wear a blue shirt on Monday and a green shirt on Tuesday.
- 24) A bag contains three yellow tickets numbered one to three. The bag also contains three green tickets numbered one to three. You randomly pick a ticket. It is yellow or has an even number.
- 25) There are four nickels and four dimes in your pocket. Three of the nickels and three of the dimes are Canadian. The others are US currency. You randomly select a coin from your pocket. It is a dime or is Canadian currency.
- 26) A cooler contains thirteen bottles of sports drink: five lemon-lime flavored, four orange flavored, and four fruit-punch flavored. Three times, you randomly grab a bottle, return the bottle to the cooler, and then mix up the bottles. The first time, you get a lemon-lime drink. The second and third times, you get fruit-punch.

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$$13) \frac{1}{32} \approx 0.031$$

$$14) \frac{7}{11} \approx 0.636$$

$$15) \frac{4}{15} \approx 0.267$$

$$16) \frac{1}{6} \approx 0.167$$

$$17) \frac{1}{128} \approx 0.008$$

$$18) \frac{8}{11} \approx 0.727$$

$$19) \frac{1}{36} \approx 0.028$$

$$20) \frac{5}{33} \approx 0.152$$

$$21) \frac{5}{6} \approx 0.833$$

$$22) \frac{8}{13} \approx 0.615$$

$$23) \frac{3}{11} \approx 0.273$$

$$24) \frac{2}{3} \approx 0.667$$

$$25) \frac{7}{8} = 0.875$$

$$26) \frac{80}{2197} \approx 0.036$$

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- 27) You roll a fair six-sided die. The die shows a one or a six
- 28) There are twelve shirts in your closet, five blue, four green, and three red. You randomly select a different shirt each day. You wear a blue shirt on Monday, Tuesday, and Wednesday.
- 29) A basket contains five apples, three peaches, and four pears. You randomly select a piece of fruit. It is an apple or a peach.
- 30) There are eight nickels and four dimes in your pocket. You randomly pick a coin out of your pocket and place it on a counter. Then you randomly pick another coin. Both coins are nickels.
- 31) There are eight shirts in your closet, four blue and four green. One of the blue shirts and three of the green shirts fit well. The others are too big. You randomly select a shirt to wear. It is blue or fits well.
- 32) A bag contains five red marbles, three blue marbles, and four yellow marbles. You randomly pick three marbles without replacement. The first marble is red, the second marble is blue, and the third marble is red.
- 33) There are fourteen shirts in your closet, seven blue and seven green. Five of the blue shirts and three of the green shirts fit well. The others are too big. You randomly select a shirt to wear. It is green or fits well.
- 34) You roll a fair six-sided die. The die shows an odd number or a number less than five.
- 35) A cooler contains twelve bottles of sports drink: four lemon-lime flavored and eight orange flavored. You randomly grab a bottle and give it to your friend. Then, you randomly grab a bottle for yourself. Your friend gets a lemon-lime and you get an orange.
- 36) There are six nickels and seven dimes in your pocket. Four of the nickels and five of the dimes are Canadian. The others are US currency. You randomly select a coin from your pocket. It is a dime or is Canadian currency.
- 37) A cooler contains eleven bottles of sports drink: five lemon-lime flavored, three orange flavored, and three fruit-punch flavored. You randomly grab a bottle. It is a lemon-lime or an orange.
- 38) A bag contains eight red marbles and five blue marbles. You randomly pick a marble and then pick a second marble without returning the marbles to the bag. Both marbles are red.
- 39) A cooler contains twelve bottles of sports drink: four lemon-lime flavored, three orange flavored, and five fruit-punch flavored. You randomly grab a bottle. It is a lemon-lime or an orange.
- 40) A box contains four red playing cards numbered one to four. The box also contains four black playing cards numbered one to four. You randomly pick a playing card. It is black or has an odd number.

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Answers

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$$27) \frac{1}{3} \approx 0.333$$

$$28) \frac{1}{22} \approx 0.045$$

$$29) \frac{2}{3} \approx 0.667$$

$$30) \frac{14}{33} \approx 0.424$$

$$31) \frac{7}{8} = 0.875$$

$$32) \frac{1}{22} \approx 0.045$$

$$33) \frac{6}{7} \approx 0.857$$

$$34) \frac{5}{6} \approx 0.833$$

$$35) \frac{8}{33} \approx 0.242$$

$$36) \frac{11}{13} \approx 0.846$$

$$37) \frac{8}{11} \approx 0.727$$

$$38) \frac{14}{39} \approx 0.359$$

$$39) \frac{7}{12} \approx 0.583$$

$$40) \frac{3}{4} = 0.75$$