

GRE Prep

Probability and Interest



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1. If you toss three coins, what is the probability of getting no heads?



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2. If you toss five coins, what is the probability of getting exactly two heads?



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3. $-9, -7, -5, -3, -1, 0, 1, 2, 3, 4, 5$

If two integers are randomly selected from the given list of numbers, what is the probability that the product of the two integers selected will be positive?



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4. The probability of rain on any day during the week is 30%. What is the probability that it will rain on both Monday and Tuesday?



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5. What is the probability of getting the sum as 9 on two throws of a six-sided dice?

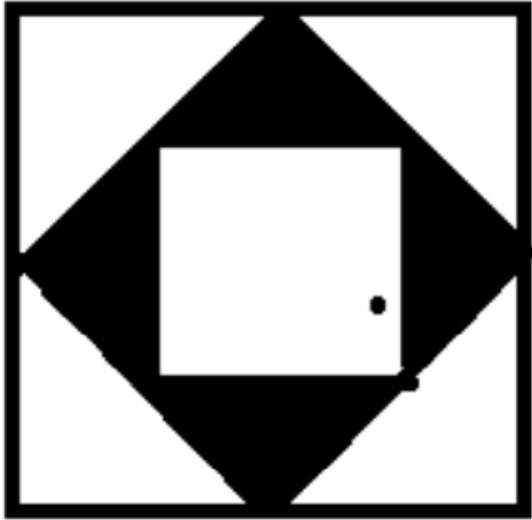


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6. If you threw a dice twice, what is the probability that the first number will be smaller than the second number

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7.



There are three squares based on the other squares' midpoint as shown in the above figure. What is the probability that if a point is picked from the larger square, it is from the shaded region?

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8. A total of 8 people will watch a movie on 7 days of the week. What is the probability that at least two of them will watch the movie on the same day?



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9. There are 27 students in Mr. White's classroom. What is the probability that at least 3 of them will have their birthday in the same month?
- A. 0
 - B. $\frac{3}{27}$
 - C. $\frac{1}{4}$
 - D. $\frac{1}{2}$
 - E. 1



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10. A room has 3 lamp sockets. From a collection of 15 bulbs, of which 10 are not good, 3 bulbs are chosen at random and put into sockets. Find the probability that the room is lit.



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11. n questions are to be marked either true or false. What is the minimum value of n for which the probability of all being true is less than $\frac{1}{1000}$?



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12. Kim invested \$2,000 for 3 years at 8% annual interest rate that was compounded annually. How much loss (to the nearest \$) would have Kim suffered if he had invested that money for 3 years at 8% simple annual interest?



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13. Josh invested $\$X$ in a special savings account that paid simple interest. The amount grew to $\$4,000$ after 2 years. Josh then waited for another 3 years and got a final amount of $\$7,000$. At what annual interest rate did Josh invest $\$X$ initially?
- A. 10%
 - B. 20%
 - C. 25%
 - D. 35%
 - E. 50%



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14. What is the least number of full years that it would take $\$X$, invested at a 20% annual interest rate, compounded annually, to be at least $\$2X$?



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15. A man can hit a target once in 4 shots. If he fires 4 shots in succession, what is the probability that he will hit his target?

A. 1

B. $\frac{1}{256}$

C. $\frac{81}{256}$

D. $\frac{175}{256}$

E. $\frac{144}{256}$



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16. If \$1,000 is invested at 15 percent annual interest, compounded semiannually, what is the approximate amount after 1 year?
- A. \$1050.3
 - B. \$1120.1
 - C. \$1145.2
 - D. \$1150.0
 - E. \$1,155.6



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17. Mark deposited \$8,000 at a 6% simple annual rate of interest. He also deposited another \$10,000 at an 8% annual rate of interest that was compounded half-yearly. What was the total amount of interest that Mark earned from these two deposits after 1 year?
- A. \$1,200
 - B. \$1,280
 - C. \$1,296
 - D. \$2,080
 - E. \$2,144



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18. A box at a yard sale contains 3 different China dinner sets, each consisting of 5 plates. A customer will randomly select 2 plates to check for defects. What is the probability that 2 plates will be from the same dinner set?
- A. $2/7$
 - B. $2/5$
 - C. $2/3$
 - D. $5/6$
 - E. $3/4$



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19. In a plane, points P and Q are 20 inches apart. If a point R is randomly chosen from all the points in the plane that are 20 inches from P, what is the probability that R is closer to P than it is to Q?
- A. 0
 - B. $\frac{1}{4}$
 - C. $\frac{1}{3}$
 - D. $\frac{1}{2}$
 - E. $\frac{2}{3}$



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20. In a bowl containing 10 marbles, 5 are blue 5 are pink. If 2 marbles are picked randomly, what is the probability that the 2 marbles selected are not both pink?

- A. $7/9$
- B. $2/9$
- C. $7/8$
- D. $5/6$
- E. $5/7$



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21. A bag consists of three differently colored bottles, which include 3 black, 4 white, and 5 red. If 2 bottles are picked randomly from the bag, what is the probability that :
- i. Both the bottles selected are Red
 - ii. Both the bottles selected are not Red
 - iii. None of the bottles selected is Red
 - iv. One is red and the other is Black
 - v. The First bottle selected is red and the second one is black





Thank you