Opposite, mutually exclusive and overlapping events worksheet – Grade 7

Grade 7 · Mixed level · 20 questions · **Version X9488**

Name: _____ Date: _____ Score: ___ / 20

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1. The probability of an event is 5/32. What is the probability of its opposite? Write it in lowest terms.

   Answer: _____

2. A bag contains 10 red, 12 blue and 5 green marbles. What is the probability of red or blue? Write it in lowest terms.

   Answer: _____

3. A jar has 13 red, 10 blue and 2 green marbles. What is the probability of red or blue? Write it in lowest terms.

   Answer: _____

4. A jar has 8 red, 7 blue and 5 green beads. What is the probability of red or blue? Write it in lowest terms.

   Answer: _____

5. A number cube is rolled. Are "even" and "greater than 3" mutually exclusive?

   A. Yes **B.** No

6. A jar has 10 red, 12 blue and 4 green counters. What is the probability of red or blue? Write it in lowest terms.

   Answer: _____

7. A box holds 10 red, 14 blue and 2 green marbles. What is the probability of red or blue? Write it in lowest terms.

   Answer: _____

8. In a class of 40, 18 play soccer, 13 play basketball and 4 play both. How many play at least one?

   Answer: _____

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9. A number from 1 to 15 is picked. What is the probability it is a multiple of 3? Write it in lowest terms.

   Answer: _____

10. In a class of 22, 15 take soccer, 10 take basketball and 3 take both. What is the probability a student takes at least one? Write it in lowest terms.

    Answer: _____

11. In a class of 39, 14 take French, 9 take Spanish and 3 take both. What is the probability a student takes at least one? Write it in lowest terms.

    Answer: _____

12. In a class of 40, 11 take piano, 11 take violin and 5 take both. What is the probability a student takes at least one? Write it in lowest terms.

    Answer: _____

13. In a class of 27, 11 play piano, 14 play violin and 5 play both. How many play at least one?

    Answer: _____

14. In a class of 40, 18 play French, 6 play Spanish and 2 play both. How many play neither?

    Answer: _____

15. A number from 1 to 30 is picked. What is the probability it is a multiple of 4 or 4? Write it in lowest terms.

    Answer: _____

16. From a deck of 52 cards, what is the probability of a heart or a queen? Write it in lowest terms.

    Answer: _____

17. In a class of 22, Arjun picks one student. 8 play piano, 12 play violin and 3 play both. What is the probability of piano only? Write it in lowest terms.

    Answer: _____

18. P(A) = 6/25, P(B) = 9/50 and P(both) = 1/10. What is P(A or B)? Write it in lowest terms.

    Answer: _____

19. In a class of 28, Dev picks one student. 11 play piano, 12 play violin and 5 play both. What is the probability of piano only? Write it in lowest terms.

    Answer: _____

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20. A number from 1 to 30 is picked. What is the probability it is a multiple of 2 or 5? Write it in lowest terms.

    Answer: _____

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Answer key · Version X9488

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1. **27/32**
2. **22/27**
3. **23/25**
4. **3/4**
5. **B (No)**
6. **11/13**
7. **12/13**
8. **27**
9. **1/3**
10. **1**
11. **20/39**
12. **17/40**
13. **20**
14. **18**
15. **7/30**
16. **4/13**
17. **5/22**
18. **8/25**
19. **3/14**
20. **3/5**

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