

Mission Math Winter Competition 2025 3-5 Exam

You will have 40 minutes to complete as much of this test as you can. There are 30 free response questions total, and questions are arranged roughly from easiest to most difficult. Units are not needed. Write answers on the given line below each question. Calculators are not allowed. Do not begin the test until told to do so. Good Luck!

Full Name: _____

Grade: _____

Age: _____

1. If Timmy has 13 apples and he buys 8 more how many apples does he have?

2. What's the mode of the list of numbers 13, 3, 17, 14, 13, 16, 17, 17?

3. What's the area of a square with side length 14?

4. Alice has 36 Skittles. He gives half of them to Bob. He then gives 7 Skittles to Carl. How many Skittles does Alice have left?

5. What's the probability of rolling an even number on a standard 6-sided dice? Express your answer as a common fraction.

6. Billy wants to buy 100 notebooks for his classes. Each notebook costs \$30. How money will Billy have to spend?

7. A rectangular garden is 10 meters long and 4 meters wide. What is the perimeter of the garden?

8. For every 1 kid that does DECA, there are 23 kids that do FBLA. How many kids are doing FBLA if there are 2345 kids doing DECA?

9. What is the remainder when 136 is divided by 3?

10. 120% of x is 96. What is x ?

11. There are 5 red marbles, 6 blue marbles, 8 green marbles, and 14 purple marbles in a bag. What is the probability of not picking a red marble? Express your answer as a common fraction.

12. What's the area of a right triangle with legs of length 6 and 8?

13. What is the cube root of 1728?

14. If Jill runs at a rate of 5mph , how long will it take her to run 10 miles?

15. If Travis made an album composed of 13 songs, how many ways are there to pick 10 songs for a playlist? Order does not matter.

16. If 8 apples and 6 oranges cost 20 dollars and 4 apples and 2 oranges costs 12 dollars what is the price of 1 apple and 1 orange?

17. 3 gaggles are equal to 7 goggles. 14 goggles are equal to 19 giggles. If I have 57 giggles, how many gaggles do I have?

18. What is the length of the hypotenuse of a right triangle with legs of length 9 and 40?

19. 1 mole can dig 5 holes in an hour. How many holes can 15 moles dig in 3 hours.

20. What is the largest prime factor of the number 2025?

21. What is the area of a circle with a circumference of 14π ? Express your answer in terms of π .

22. A taxi charges an initial fee of \$5 plus \$0.25 per mile. Joe has \$12. How many miles can Joe travel in the taxi?

23. Mina rolls a fair dice 4 times. What is the probability it will land on 3 or 4 all 4 times? Express your answer as a common fraction.

24. How many perfect squares are there between 15 and 125?

25. What is the value of $\frac{13!}{11!}$?

26. Sara needs to buy 24 pencils. If pencils are sold in packs of 6 for \$4 each, how much does she pay?

27. Lavanya owns 6 different shirts, 3 different pairs of pants, and 2 hat. An outfit must include exactly 1 shirt, 1 pair of pants, and 1 hat. How many different outfits can Lavanya make?

28. How many diagonals does a regular pentagon have?

29. How many distinct ways can the letters of the word "ALGEBRA" be arranged?

30. If the number $4A6$ is divisible by 9, what is the value of A ?
