



MCMC Fall 2025

Intermediate - Speed

DO NOT BEGIN UNTIL YOU ARE INSTRUCTED TO DO SO

Rules and Code of Conduct

- This exam consists of 20 short-answer questions. Please write your answer legibly in the designated boxes. If your grader is unable to determine the answer you wrote, you may lose points. Please write your digits 0 - 9 in the boxes below in the boxes below so that we can reasonably judge your handwriting in the case of doubt.
- The difficulty of questions increases roughly as the test progresses.
- You will have 15 minutes to complete this exam. Once the exam begins, there will be no pauses in your time.
- No aids of any type are permitted for this exam other than the resources provided to you.
- An ample amount of scratch paper will be provided if you need more during the examination. Please raise your hand and remain seated. A proctor will bring you the extra paper.
- If you have any other questions at this time, please raise your hand. We will begin shortly. We wish you all good luck!

Name: _____

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1. Benny bought 3 packs of stickers, each with x stickers. He already has 7 stickers. If he now has 25 stickers, solve for x .

2. Benny is simplifying his candy collection: $5(2x - 3) - 4(x + 1)$. What does he get in terms of x ?

3. Benny is drawing a triangle with base 8 cm and height 5 cm. In cm^2 , what is the area of his triangle?

4. Solve for y : $2y - 3 = 7$.

5. Benny, Jenny, Lenny, Kenny, and Denny have 6, 3, 17, 8, and 11 marbles respectively. How many marbles do they have, on average?

6. If Benny's train travels 60 miles in 1.5 hours, what is his train's average speed?

7. Factor $x^2 + 2x + 1$ completely.

8. If Benny's favorite rectangle has a perimeter of 24 cm and a length of 7 cm, what is its area?

cm

9. Write 0.625625 as a fraction in simplest form.

10. Benny needs to solve for x : $x^2 = 289$. Please help him do so:

11. A bag of Benny's favorite chips contains 8 red, 15 blue, and 17 green chips. What is the probability he picks a red chip first?

12. Benny is in a hotel in Paris and doesn't know what temperature to put the AC at. Convert 70°F to Celsius using $C = \frac{5}{9}(F - 32)$.

$^{\circ}\text{C}$

13. Benny has an allowance of \$2. If he spends 12.5% of his money on a candy bar, how much, in cents did the candy cost?

cents

14. The sum of Benny's favorite two consecutive integers is 89. What is their product?

15. Solve for x : $5(x - 2) = 3x + 4$.

16. Benny buys pencils in packs of 6. He needs 48 pencils. How many packs does he need?

17. Write the first 4 multiples of 23.

18. The angles of a triangle in Benny's newest drawing are in the ratio 2:3:4. What is the smallest angle?

19. A circle has a radius of 7 cm. What is its circumference? (Use $\pi \approx 3.14$.)

20. Benny buys 3 notebooks and 2 pens for \$14. If a notebook is \$3, how much is each pen?