

Middle School Division

Mental Math, Section 1

40 minutes, 25 questions

Instructions

- DO NOT open the test until told to do so.
- NO scratch paper!
- Express all of your answers in simplified form.
- Please read the instructions before you start.

Please write your name :

Please write your ID number :

Instructions : This is Section 1, Mental Math. You MAY NOT use scratch paper on this section or jot down any work. This is meant to be done in your head. Do all of the questions to the best of your ability. All questions in this section are multiple choice.

Bubble in the multiple choice answers onto the green Scantron.
IF we cannot read your answers, it will be marked wrong.

Multiple Choice

1. $12 \times 4 + 36 \div 9$
(A) 52 (B) 42 (C) 62 (D) 32 (E) 72
2. $2443 - 123$
(A) 2220 (B) 2280 (C) 2360 (D) 2320
(E) 2420
3. $3(12 - 6) \times 5 - 10 + 40 \div 20$
(A) 94 (B) 100 (C) 110 (D) 95 (E) 101
4. $9 + 3 \times 2 - 4 \div 2$
(A) 15 (B) 13 (C) 17 (D) 10 (E) 20
5. $108 \div 12 + 16 \div 32 + 1.5$
(A) 9 (B) 11 (C) 13 (D) 15 (E) 17
6. What is 34 percent of 300?
(A) 100 (B) 105 (C) 102 (D) 118 (E) 92
7. $(5 * ? - 32) \times 3 - 15 = 9$
(A) 11 (B) 8 (C) 6 (D) 9 (E) 20
8. Alex works out half of the days in a month (30 days). How many times does he workout in a year?
(A) 200 (B) 160 (C) 180 (D) 170
(E) 250
9. Casey's car traveled 300 miles in 4 hours. At what speed was Casey's car traveling?
(A) 60 mph (B) 75 mph (C) 80 mph
(D) 70 mph (E) 90 mph
10. What is the price of one tennis ball in a package of 4 balls, if a package costs \$10.44?
(A) \$2.61 (B) \$2.76 (C) \$2.50
(D) \$2.40 (E) \$2.80
11. A bike accelerates uniformly at a rate of 2 m/s^2 . How long does it take to get to a speed of 10 m/s ?
(A) 4 (B) 10 (C) 5 (D) 6 (E) 8
12. What is 45×17 ?
(A) 750 (B) 780 (C) 765 (D) 793
(E) 746
13. How far will Jake run if he runs at a rate of 50 feet per minute for an hour?
(A) 3000 (B) 2500 (C) 2800 (D) 3200
(E) 3500
14. $20 - \frac{12}{4} + (5 \times 2)$
(A) 23 (B) 30 (C) 27 (D) 25 (E) 20
15. $2(x + 3) - 4 = 10$
(A) 7 (B) 9 (C) 3 (D) 4 (E) 5
16. $\frac{1}{z} + 9 = 11$
(A) 0.3 (B) 0.7 (C) 0.5 (D) 0.4
(E) 0.6

17. Convert 25 feet to inches.
(A) 250 (B) 350 (C) 320 (D) 280 (E) 300
18. If an object weighs 324 kilograms on Earth, what would be its weight on the moon where gravity is approximately $\frac{1}{6}$ th that of Earth's?
(A) 45 (B) 54 (C) 63 (D) 72 (E) 81
19. Isaac needs to pay the cashier exactly \$49. In his wallet, he has 2 twenty dollar bills and 6 one dollar bills. How many quarters does Isaac need?
(A) 8 (B) 10 (C) 12 (D) 14 (E) 16
20. What is the mean of the test scores 86%, 50%, 25%, and 79%?
(A) 60% (B) 54% (C) 70% (D) 65%
(E) 48%
21. How many minutes are in a day?
(A) 1200 (B) 1440 (C) 1500
(D) 1300 (E) 1600
22. $0.13 \times 0.12 + 0.11 \times 0.10$
(A) 0.015 (B) 0.027 (C) 0.030 (D) 0.022 (E) 0.028
23. What is $9116 - 527$?
(A) 8134 (B) 9298 (C) 8589 (D) 6721
(E) 7463
24. A car is circling a roundabout. The radius of the roundabout is 40 meters. He wants to put grass in the roundabout. How much area of grass does the person want to put?
(A) 1200π (B) 1500π (C) 1600π (D) 1700π (E) 2000π
25. What is the sum of the first 15 prime numbers?
(A) 322 (B) 330 (C) 317 (D) 336
(E) 328