



MONTANA COUNCIL OF TEACHERS OF MATHEMATICS
2011 MATH CONTEST
7th GRADE TEST

DIRECTIONS: DO NOT WRITE ON THIS TEST. Place the best answer for each question on the separate answer sheet.

1. A sofa sells for \$520. If the retailer makes a 30% profit, what was the wholesale price?
a.) \$400 b.) \$676 c.) \$490 d.) \$364
2. Kevin is buying fabric for new curtains. There are three windows, each 35 inches wide. Kevin needs to buy fabric equal to $2\frac{1}{2}$ times the total width of the windows. How much fabric should he buy?
a.) $262\frac{1}{2}$ in b.) $175\frac{1}{2}$ in c.) $210\frac{3}{4}$ in d.) $326\frac{1}{4}$ in
3. During an eight-hour workday, Bob spends two hours on the phone. What fraction of the workday does he spend on the phone?
a.) $\frac{1}{5}$ b.) $\frac{1}{3}$ c.) $\frac{1}{4}$ d.) $\frac{1}{8}$
4. Find the time between 9:45:12 am and 1:33:19 pm.
a.) 4:35:07 b.) 3:48:07 c.) 2:48:37 d.) 3:17:47
5. If a bus weighs 2.5 tons, how many pounds does it weigh? (one ton = 2000 pounds)
a.) 800 lbs b.) 4500 lbs c.) 5000 lbs d.) 5500 lbs
6. $24 - 3 \times 7 + 2 =$
a.) 5 b.) 149 c.) -3 d.) 189
7. If cleaning costs \$32 for 4 hours, how much is it for 10.5 hours?
a.) \$112.50 b.) \$87 c.) \$84 d.) \$76.50
8. A rectangle has an area of 625 squares meters. Its length is 25 meters. How wide is the rectangle?
a.) 25 m b.) 20 m c.) 125 m d.) 600 m
9. Skateboard T-shirts that were selling for \$15.00 have been discounted 25%. A blue light special reduces the sale price an additional 15% of the sale price. What is the T-shirt price with the blue light special?
a.) \$9.00 b.) \$6.00 c.) \$6.56 d.) \$9.56

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10. What is the range of the following numbers? 34, 14, 43, 35, 45, 18, 33, 42
a.) 31 b.) 32 c.) 26 d.) 19
11. If you throw 2 fair six-sided dice, how many different ways can you get a sum of 7?
a.) 3 b.) 4 c.) 5 d.) 6
12. In the local Two Dot, MT paper, there are 5 houses listed for sale in the classifieds. Their prices are \$38500, \$41300, \$39600, \$42100, and \$235000. Using these numbers, which of the following is the best statistic to use to represent the cost of a house in Two Dot?
a.) mean b.) median c.) mode d.) range
13. Solve $x + 43 = -18$
a.) -25 b.) 61 c.) -61 d.) 25
14. In Fairfield, MT on December 24, 1924, the temperature changed from 63° at noon to -21° at midnight. What is the temperature change?
a.) -84° b.) 84° c.) -42° d.) 42°
15. In every right triangle, two sides are always
a.) equal in length b.) horizontal c.) perpendicular d.) vertical
16. Half of the 24 people in a room leave. Then, half of those who left return. How many people are now in the room?
a.) 6 b.) 12 c.) 18 d.) 24
17. Evaluate this expression if $a = 9$, $c = 2$, $t = 11$ and $u = 0$. $6a + c + 3t + 2u$
a.) 132 b.) 89 c.) 33 d.) 40
18. How many different ways can you score 6 points in a basketball game? (There are 1 pt, 2 pt, and 3 pt shots.)
a.) 6 b.) 4 c.) 10 d.) 7
19. A rectangle floor rug is 2 yd by 3 yd. How many square inches will be needed to cover the floor?
a.) 5160 in^2 b.) 6494 in^2 c.) 4888 in^2 d.) 7776 in^2
20. Solve for x: $3x - 2 = 16$
a.) $x = 5$ b.) $x = 6$ c.) $x = 7.5$ d.) $4 \frac{1}{3}$
21. Joe needs to pour a concrete floor for a garage. The floor is to be 27 feet by 30 feet by 6 inches thick. If concrete costs \$76.00 per cubic yard, what is the cost of the concrete?
a.) \$307.80 b.) \$910.00 c.) \$1050.50 d.) \$1140.00
22. What is the sum of the first four prime numbers?
a.) 17 b.) 18 c.) 19 d.) 20

7th GRADE TEST 2011 Answer Key

- 1.) A
- 2.) A
- 3.) C
- 4.) B
- 5.) C
- 6.) A
- 7.) C
- 8.) A
- 9.) D
- 10.) A
- 11.) D
- 12.) B
- 13.) C
- 14.) A
- 15.) C
- 16.) C
- 17.) B
- 18.) D
- 19.) D
- 20.) B
- 21.) D
- 22.) A