

**2007 Pizitz Mathematics Tournament
Sixth Grade Ciphering**

- 1.1 Simplify: $20 - 12 \div 2 + 4$
- 1.2 A square has the same side length as a regular hexagon with a perimeter of 45 in. What is the perimeter of the square?
- 1.3 Solve: $4x + 26 = 54$
- 1.4 A radio priced \$49.96 is on sale at 30% off. What is the sale price?
- 1.5 A bag of marbles contains 9 red marbles, 8 blue marbles, and 5 green marbles. What is the probability of blindly drawing a red or green marble?
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- 2.1 A triangle has an area of 42 sq. in. Its base is 7 in. What is its height?
- 2.2 Simplify: $-53 + (32 - 47)$
- 2.3 Sam reset the time on a clock showing 3:55 by rotating the minute hand 7920° . What was the new time?
- 2.4 In how many ways can six students stand in a line?
- 2.5 What is the sum of the next two numbers in the sequence 18, 16, 12, 6, . . . ?
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- 3.1 A recipe uses 2 cups of flour to make one dozen brownies. How much flour is needed to make 30 brownies?
- 3.2 What is the product of the range and median for {19, 12, 15, 21}?
- 3.3 Simplify: $24 - 4(15 \div 3 + 2)$.
- 3.4 A semicircle has a diameter of 20 cm. What is its area? (use 3.14 for π)
- 3.5 Tom had \$1.18 in coins in his pocket. 81¢ fell out of his pocket while he played catch. What is the fewest number of coins that remained in his pocket?
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- 4.1 If $A \star B$ means $\frac{A}{B} + \frac{B}{A}$, then what is $3 \star 4$?
- 4.2 Solve: $2y + 9 - 15 = 16 - 20$.
- 4.3 What is the area of a right triangle with side lengths 26 ft., 10 ft., and 24 ft.?
- 4.4 The weatherman predicts a 30% chance of snow on Sunday. What are the odds for snow on Sunday?
- 4.5 Simplify: $(3^2 - 3)^2$.
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- Ex1 What is 37.5% of 720?
- Ex2 What is the sum of the single-digit primes?