2003 Washington State Math Championship

Unless a particular problem directs otherwise, give an exact answer or one rounded to the nearest thousandth.

Mental Math - Grade 8

1. Radii of a circle cut it into 20 equal sectors. The central angle of each sector is how many degrees?

2. What is the combined volume of three cubes that each have an edge length of 2?

3. What is 30% of one-eighth of 400?

4. A square pyramid fits exactly on top of a square prism. How many total edges and vertices does the resulting figure have?

5. Express four-fifths minus five-tenths as a percent.

6. Square 13; reverse the digits; and then find the square root.

7. What is the sum of 12, 39, and 38?

8. What is the perimeter of regular hexagon with side length 13?

9. What is 17 percent of 900?

10. How many thousand is 150 times 300?

11. What is 8 times 39?

12. A square with area 16 is combined with 8 others just like it to form a larger square. What is the perimeter of the larger square?

13. What is one-seventh of 91?

14. What is the difference between three-fourths and one-fifth?

15. What is the number of degrees in a right angle times the number of degrees of one angle of an equilateral triangle?

16. What is the diameter of a circle with area 36 pi?

17. What is the product of next 3 composite numbers after 6?

18. What is the sum of negative 5, negative 21, negative 25, and positive 30?

19. What is the product of 19 and 45?

20. A card is drawn from a standard deck, and a die is tossed. What is the probability of getting a seven from the deck and an odd number from the die?