

Furman Wylie Mathematics Tournament
Junior Exam Answers
March 11, 2006

1. The answer is $\sqrt{2}$, which is choice (2).
2. The answer is 9, which is choice (2). The value of x in question is $4/5$.
3. The answer is 6π , which is choice (3).
4. The answer is 59, which is choice (4).
5. The answer is 8, which is choice (3).
6. The answer is 84, which is choice (2).
7. The answer is only 1, which is choice (2).
8. The answer is 44, which is choice (3).
9. The answer is 42, which is none of the above, so your choice should be (5).
10. The answer is 520, which is choice (4).
11. The answer is 10000 which is choice (3).
12. The answer is \$33, which is none of the above, so the choice should be (5). Hint: work backwards.
13. The answer is 84%, which is choice (1). This question is in honor of Ms. Lyddane—AKA my sister, who has decided at the age of 45 to become a high school mathematics teacher!
14. The answer is $\frac{3\sqrt{2}+5}{2}$, which is choice (3). Hint: Find the distance between the centers of these circles, and add the radii. This should be the diameter of the circle you are looking for.
15. The answer is 14, which is choice (4). Put 8 along the back row on one side of the board, and the other six along the the other back row, omitting the corners.
16. The answer is 10, which is choice (4).
17. The answer is 11, which is choice (4). I hope everyone knows what an lp record is . . .
18. The answer is Fred's Mother, which is choice (4). Maybe Mary's sister didn't want to sit there, but there weren't a lot of seats left . . .
19. The answer is 247, which is choice (2).
20. The answer is 121, which is choice (3).
21. The answer is that -2.5 , which is choice (1). The possible values for the slope of the line are -2 and $-.5$.
22. The answer is 17, which is choice (2). The number in question is 665.
23. The answer is 2, which is choice (2).

24. The answer is 6, which is choice (3).
25. The answer is $2/3$, which is choice (3). Be careful on this one – don't draw the wrong picture.
26. The answer is 4, which is choice (1).
27. The answer is 3, which is choice (2).
28. The answer is 30, which is choice (4). For you youngsters out there – this is a reference to former President Reagan and his wife – he allegedly loved jelly beans and kept them on his desk in the oval office.
29. The answer is 45, which is choice (3). $S = 4,999,950$.
30. The answer is 59, which is choice (2).
31. The answer is 30, which is choice (2). I hope everyone knows what Rubik's cube is. I guess I'm dating myself on this exam ...
32. The answer is 12, which is choice (1). Perri is 5 and Malorie is 7.

Bonus 1 The answer is (4, 3, 5).

Bonus 2 The answer is 3456.