

2015 GUTS ANSWER KEY

March 2015

1. 36000
2. $5/4$ or equivalent
3. 20

4. 3
5. 65 or 66
6. 6

7. 0,4 in any order
8. 5, 12, 13 in any order
9. 38

10. $20\sqrt{15}$
11. 16
12. 51

13. 42
14. 200
15. 2016 and 4062240 or 2016 and $2016 \cdot 2015$

16. 8640
17. 16
18. 315

19. .20462046... with 2046 repeating (bar or "... " notation are acceptable, "... " only if they repeat the sequence twice.
20. 1
21. $12\sqrt{3}$

22. 15000000_7 or 15000000
23. $9\left(\frac{1}{f(x)}\right)^2 - 36$ or $\left(\frac{3}{f(x)}\right)^2 - 36$ or similar equivalent
24. 68.5%

25. 2047
26. 153
27. $\frac{25}{3}$

28. 9

29. 16

30. 25

31. 2702

32. 101

33. 42

34. computer $a \leq 1750, b \geq 1751$

35. computer (About 10^{41})

36. computer (all received 0 points since $S > 10000$)