

Rochester Math Circle Placement Test (Advanced)

Answers

July 23, 2017

1 Answers

Detailed solutions will be available to you once you become a member of the Rochester Math Club.

1. 400

2. 354

3. $1 - \frac{\sqrt{3}}{4}$

4. $\frac{15}{16}$

5. $\frac{7}{3}$

6. 108

7. 35

8. $\frac{1}{2}$

9. 180

10. 864

11. $\frac{55}{2}$

12. 480

13. (3,18), (4,4)

14. 29
15. (5,7)
16. $\frac{2016}{2017}$
17. $\frac{9\sqrt{5}}{2}$
18. $\frac{630}{19}$
19. $\frac{\pi}{3} - \frac{\sqrt{3}}{4}$
20. $\frac{5\sqrt{5}}{3}$
21. $\frac{1}{322}$
22. $\frac{5(\sqrt{2} + \sqrt{6})}{16}$
23. 1631
24. $\frac{89}{16}$
25. $\frac{1280}{3}$
26. 24
27. 23255
28. $\frac{\sqrt{10 - 2\sqrt{5}}}{4}$
29. $\frac{5\sqrt[3]{5} + 2\sqrt[3]{25} + 4}{17}$
30. 288