





2018 John O'Bryan Mathematical Competition  
Junior-Senior Individual Test

1. \_\_\_\_\_  $-6$  \_\_\_\_\_

11. \_\_\_\_\_  $387$  \_\_\_\_\_

2. \_\_\_\_\_  $\frac{mp}{m + pr}$  \_\_\_\_\_

12. \_\_\_\_\_  $14$  \_\_\_\_\_

3. \_\_\_\_\_  $(2,7)$  \_\_\_\_\_ **Must be this ordered pair.**

13. \_\_\_\_\_  $-1$  \_\_\_\_\_

4. \_\_\_\_\_  $(2, 2)$  \_\_\_\_\_ **Must be this ordered pair**

14. \_\_\_\_\_  $\frac{3}{7}$  \_\_\_\_\_ **Must be this reduced fraction.**

5. \_\_\_\_\_  $110$  \_\_\_\_\_ **(degrees optional)**

15. \_\_\_\_\_  $\frac{k}{2w}$  \_\_\_\_\_

6. \_\_\_\_\_  $\frac{24}{25}$  \_\_\_\_\_ **Must be this reduced fraction.**

16. \_\_\_\_\_ \_\_\_\_\_ **Must be exactly**

7. \_\_\_\_\_  $\frac{15}{29}$  \_\_\_\_\_ **Must be this reduced fraction.**

17. \_\_\_\_\_  $1017$  \_\_\_\_\_

8. \_\_\_\_\_  $7$  \_\_\_\_\_ **18. \_\_\_\_\_  $\frac{14}{5}$  \_\_\_\_\_ **Must be this reduced fraction.****

9. \_\_\_\_\_  $8073$  \_\_\_\_\_ **19. \_\_\_\_\_  $18$  \_\_\_\_\_**

10. \_\_\_\_\_  $-\frac{15}{17} - \frac{9}{i}$  \_\_\_\_\_ **Must be exactly**  
**20. \_\_\_\_\_  $30\sqrt{2}$  \_\_\_\_\_ **Must be exactly this answer.****