

$$|50 - 10|$$

randomly throwing two fair 6-sided dice (the faces of each die are labeled with the values 1, 2, 3,

mean of the first three common terms of these sequences.

4. Let  $y = mx + b$  be the equation of a line that contains  $(2, 18)$  and is perpendicular to the line whose

some order form an arithmetic sequence. Express your answer as an improper fraction, reduced to

$$m^2 + n^2 = m^2 + n^2$$

Names: \_\_\_\_\_

Team Code: \_\_\_\_\_

2015 John O'Bryan Mathematical Competition  
Two-Person Speed Event

SCORE

Calculators are not allowed to be

2<sup>nd</sup>: 6 points  
All Others: 3 points

There is another minute time limit.

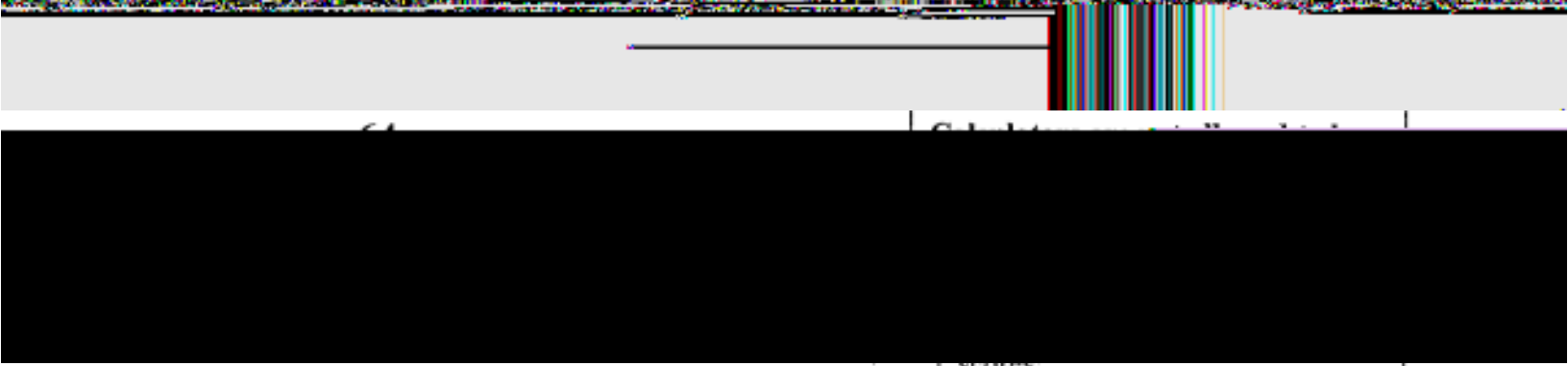
7.

T2.

Final Exam - 2018

Answer all questions on this exam. You have 1 hour to complete the exam.

Note: All answers must be written legibly and in simple form. Do not write on the back of the page.



scores.

1<sup>st</sup>: 7 points  
2<sup>nd</sup>: 5 points  
All others: 3 points

3

38

4

105

are in a class of 1000. Each class

on each round. You may submit



3860

32

8. \_\_\_\_\_

T1. \_\_\_\_\_

T2. \_\_\_\_\_