Name _____ Period _____ Date _____

THE RUNNING GAME

Go to student.desmos.com, get the class password from your teacher, and do the Desmos activity called The Running Game.

1. If Sam can run at a pace of 7 minutes 21 seconds (7:21) per mile on average, how long would it take him to run 4 miles at that pace? 29:24	2. Kim ran 3 miles in 30:04. What was her average pace per mile? Very close to 10:01 (10 min and $1\frac{1}{3}$ sec)

Answers below will vary. One example:

3. Amet ran 5 miles in 39 minutes. He ran each mile at a different pace, but each mile was within 1 minute of the mile before it and the mile after it.

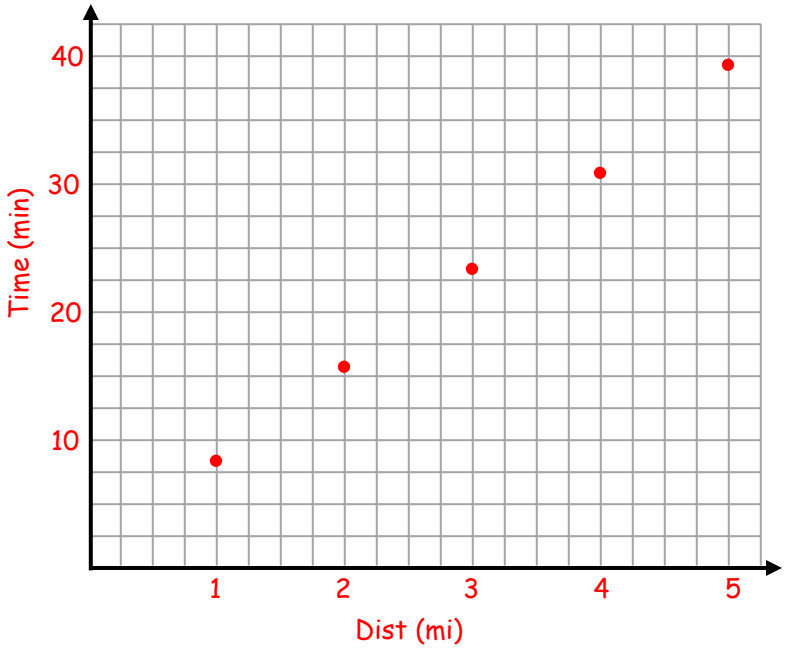
   a. Write reasonable times for each mile in the table.

Mile #	1	2	3	4	5
Time	7:55	7:45	7:47	7:52	7:41

   b. Make a new table to record total time at each mile.

Distance in miles	1	2	3	4	5
Time in minutes	7:55	15:40	23:27	31:19	39

   c. Graph the data in part b above. Label and scale your graph appropriately.
   It is okay to draw a trend line.



   d. Write a reasonable ordered pair to fit this graph:
   (6, 46:48)

   Explain what this ordered pair means in the context of the problem.
   Amet ran a total of 6 miles in 46 min 48 sec.
   7:48 is 7 min 48 sec = 7.8 min

4. Find a value that approximates this equation:

   Time in minutes = 7.8 • distance in miles

   Let t = time and d = distance, and rewrite the equation above: $t = 7.8d$