



The Road to Proportional Reasoning: NAVIGATION GUIDE & PRINTABLE FORMS

Kentucky Horse Park: At the Track

Welcome to “At the Track.” This interactive opens to an image of a racetrack.

Choose an opponent for Man o’ War to race. After exploring the relative speeds of various opponents, click the “Calculate” button to complete a table on the runners’ distances, times, and speeds.

When you compute the speeds of the runners, there is a small margin of error, since you might come up with slightly different answers. A more exact answer will pop up in place of your approximate answer.

After you fill out the table correctly, it will automatically reorder the six runners from slowest to fastest. At this point, several questions will appear. The “Check Answers” button will reveal whether your answers are correct. Correct answers are green and incorrect answers are red.

CALCULATE [Reset]

Man o’ War Time: Distance: 1 minute

1 2 3 4 5 6

Pick a racer Time: Distance:

Fill in column 1 by racing Man o’ War and his opponents for 60 seconds. Choose an opponent’s number and click 1 minute. Distances will appear on the track after the race.

When you complete column 1 correctly and click Check Answers, a new screen will pop up. Correct answers are green; incorrect answers are red.

Table: At the Track

Racer #	Distance for 60 sec (mi)	Time for 1 mile (sec)	Speed (mph)
1			
2			
3			
4			
5			
6			

[Check answers] [EXPLORE]

Distance vs. Speed
Time vs. Speed

When you have answered all the questions on a page correctly, you can click on “Next” for more questions. Graphs of your recorded data will pop up to help you.

Continue following the text prompts in the bottom left side of the screen until you have completed the interactive. At this point, you can view the Speed vs. Distance graph, the Speed vs. Time graph, or the completed table.

Text of Help and Hint Boxes for “At the Track”

There are no help boxes or hidden hints for “At the Track.” The instructions and prompts on the bottom left side of the screen provide all the information needed to complete the interactive.



“At the Track” Table and Questions

Step 1:

Fill in column 1 by racing Man o' War and his opponents for 60 seconds. Choose an opponent's number and click 1 minute. Distances will appear on the track after the race.

Step 2:

Fill in column 2 by racing Man o' War and his opponents for 1 mile. Times will appear on the track after the race.

Step 3:

Fill in column 3 by calculating each runner's speed in miles per hour and rounding to the nearest tenth. Use the data in column 1 or 2 to calculate.

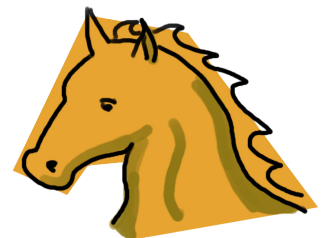
Table: At the Track

Racer #	Distance for 60 sec (mi)	Time for 1 mile (sec)	Speed (mph)
1			
2			
3			
4			
5			
6			

Now sort the runners from slowest to fastest in the table below.

Table: At the Track

Racer #	Distance for 60 sec (mi)	Time for 1 mile (sec)	Speed (mph)
1			
2			
3			
4			
5			
6			



Questions About Completed Table, Part 1

Compare the figures in column 1 with the figures in column 3. As the speed of the runner increases, the distance the runner covers in one minute:

_____ Increases _____ Decreases

What phrase describes the relationship between distance traveled in one minute and speed?

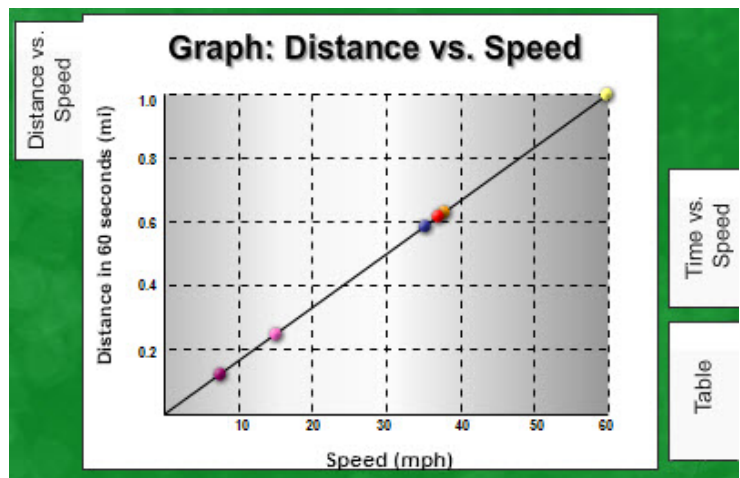
_____ Directly Proportional _____ Inversely Proportional

Questions About Distance vs. Speed Graph

In 60 seconds, a 30-mph runner will run a distance of about: _____ miles

In 60 seconds, a 10-mph runner will run a distance of about: _____ miles

The ratio of the 30-mph runner's speed to that of the 10-mph runner is: _____ to 1.



Questions About Completed Table, Part 2

Compare the figures in column 2 with the figures in column 3. As the speed of the runner increases, the time it takes the runner to travel one mile:

_____ Increases _____ Decreases

What phrase describes the relationship between the time it takes to run one mile and the speed of the runner?

_____ Directly Proportional _____ Inversely Proportional



Questions About Time vs. Speed

A 40-mph runner runs 1 mile in about:

_____ seconds

A 50-mph runner runs 1 mile in about:

_____ seconds

The ratio of the 40-mph runner's time to the

50-mph runner's time is: _____ to 1

