

World Record Balloon Dog

Prerequisite Skills:

- graph points on a coordinate grid
- proportions

Problem:

1. Watch the video "World Record Balloon Dog" (found at <http://www.101qs.com/3933>). In the video you will see a dog trying pop 100 balloons in world record time.
2. How long does it take the dog to break 25 balloons? How long do you predict that it will take the dog to break all 100 balloons? Discuss and compare your prediction with other students' predictions. In the space below, share how you made your prediction (using words and calculations).
3. Using what you discussed in the question above, predict how long it will take to pop 40 balloons, 50 balloons, 60 balloons, 70 balloons, 80 balloons and 90 balloons. Fill in the values in the chart below. Share and discuss your predictions with a partner.
4. Graph your predicted values. Connect the points with a line or curve.
5. Watch the full length video of the dog popping the balloons. How close was your prediction for how long it took the dog to pop all 100 balloons? How do you explain any differences between your

prediction and the actual time to pop all 100 balloons? Did your classmates have better or worse predictions than you did?

6. Watch the full length video again. This time, pause the video when approximately 25, 40, 50, 60, 70, 80, 90 and 100 have been popped. Record the times that correspond to these values in the table below. How do they compare with your predicted values in question 4 above?

7. Using a different colored marker, pen, or pencil, graph the values from question 6 on the same grid you used for question 4. How do the two graphs compare?

8. What does the graph of the actual times and balloons popped tell you about the speed at which the dog was popping balloons? How did the speed change over time? Discuss with a partner.

9. On the graph of the actual values, label the part of the graph that shows the dog's speed slowing?