

QUIZ / Wheel Size Matters

NAME

DATE

CLASS PERIOD

Put a check ☐ in the o next to the correct answer.

1. How does the modified Squarebot differ from the original Squarebot?
 - ☐ The modified Squarebot is battery-powdered
 - ☐ The power setting for the modified Squarebot was increased
 - ☐ The gears for the front wheels were removed on the modified Squarebot
 - ☐ The front wheels on the modified Squarebot were replaced by larger wheels
2. What is kept constant in this investigation??
 - ☐ Wheel size
 - ☐ Type of robot
 - ☐ The distance the robot travels
 - ☐ The speed the robot reaches
3. Which variable is the dependent in this investigation?
 - ☐ The distance the robot travels
 - ☐ The speed the robot reaches
 - ☐ Wheel size
 - ☐ Type of robot
4. What are systematic errors?
 - ☐ Errors that affect data
 - ☐ Errors that are caused by human jugments
 - ☐ Errors that we are unable to detect
 - ☐ Errors that always affect data the same way
5. What are random errors?
 - ☐ Errors that always affect data the same way
 - ☐ Errors that are caused by human jugments
 - ☐ Errors that affect data different ways at different times
 - ☐ Errors that we are unable to detect

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6. Which variable is the dependent in this investigation?
- ☐ The distance the robot travels
 - ☐ The speed the robot reaches
 - ☐ Wheel size
 - ☐ Type of robot
7. Interpolation of data values means predicting a new value
- ☐ between existing values
 - ☐ beyond existing values
 - ☐ from a new data set
 - ☐ none of the above
8. Extrapolation of data values means predicting a new value
- ☐ between existing values
 - ☐ from a new data set
 - ☐ beyond existing values
 - ☐ none of the above
9. Given the following five distances measured in inches, calculate the average distance: 43.8 in, 47.2 in., 41.1 in., 44.5 in., 42.3 in.
- ☐ 219.2 in.
 - ☐ 43.84 in.
 - ☐ 45.9 in.
 - ☐ 42.6 in.
10. Convert 47.8 inches to centimeters.
- ☐ 121.4 cm
 - ☐ 188.1 cm
 - ☐ 12.1 cm
 - ☐ 18.8 cm
11. Given the plot shown below (Figure 1), about what speed would a wheel with a diameter of 7 inches reach?
- ☐ 45 inches/second
 - ☐ 55 inches/second
 - ☐ 65 inches/second
 - ☐ 75 inches/second

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12. Given the plot shown below (Figure 1), what is the approximate diameter if a wheel that reaches 20 inches/second?

- ☐ 2.5 in.
- ☐ 2.0 in.
- ☐ 1.5 in.
- ☐ 1.0 in.

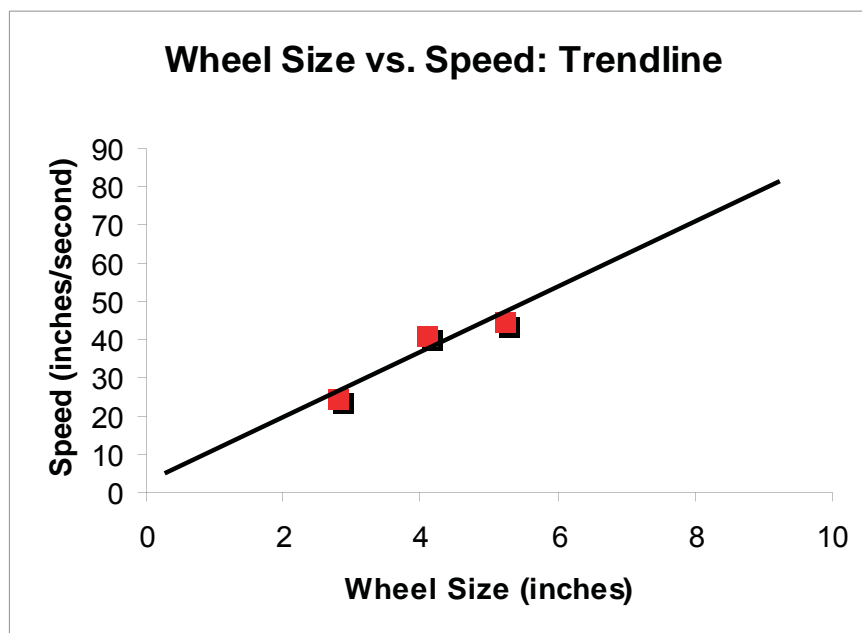


Figure 1