QUIZ / Wheel Size Matters

NAME DATE CLASS PERIOD

Put a check ✔ in the ☐ 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 ravles
   - ☐ 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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NAME DATE CLASS PERIOD

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.**

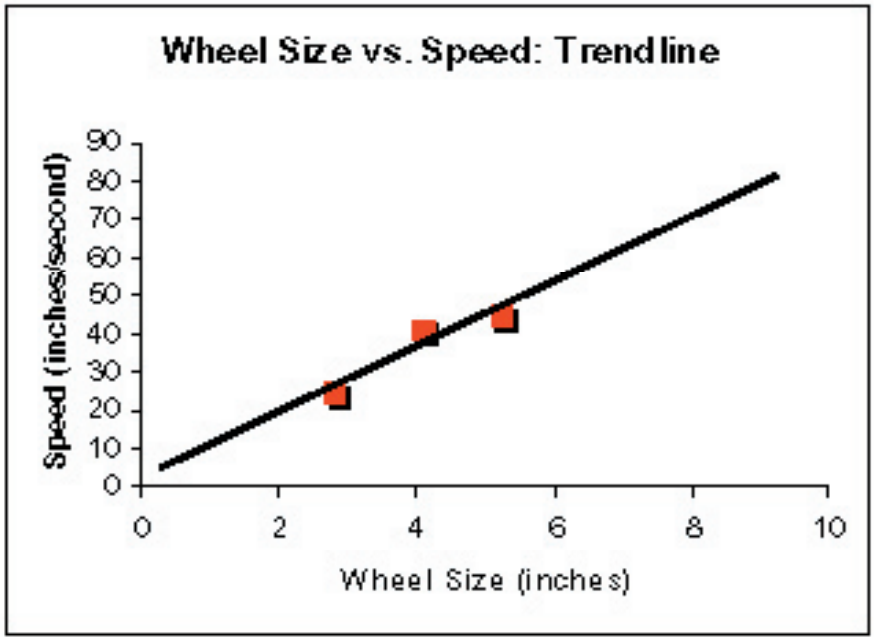

Figure 1