Name_____Hour_____ Color Chairs_____ Date_____

Formative Assessment on Revolutions, Arc Measurement, Linear Speed, and Angular Speed

You have a paint roller that has a diameter of 3 inches. You push the roller against the wall and it travels 1020°

1. What is the number of revolutions that the roller has travelled?

2. What is the measure of the angle in radians?

3. What is the length of arc that the roller travelled? Give as an exact answer as well as an approximate answer

4. If the paint on the roller was dispensed from the beginning of the motion, then how far on the wall have you painted (linearly)?

5. If it took you 10 seconds to perform this task, then state each of the following

    a. Linear speed in inches per second

    b. Linear speed in feet per second

    c. Linear speed in feet per minute

6. If it took you 10 seconds to perform this task, then state each of the following

    a. Angular speed in radians per second

    b. Angular speed in radians per minute

7. You are pulling a cart and the cart's wheel is 20 inches in diameter and you notice that the wheel is making 1.8 revolutions per second
    a. Determine the angular speed of the cart's wheel (leave answer in radians/second)

    b. Determine the speed of the cart (give exact and approximate speed in inches/second)

    c. Determine the speed of the cart (give exact and approximate speed in feet/minute)

Name_____Hour_____ Color Chairs_____ Date_____

Formative Assessment on Revolutions, Arc Measurement, Linear Speed, and Angular Speed

You have a paint roller that has a diameter of 4 inches. You push the roller against the wall and it travels 822°

1. What is the number of revolutions that the roller has travelled?

2. What is the measure of the angle in radians?

3. What is the length of arc that the roller travelled? Give as an exact answer as well as an approximate answer

4. If the paint on the roller was dispensed from the beginning of the motion, then how far on the wall have you painted (linearly)?

5. If it took you 15 seconds to perform this task, then state each of the following

    a. Linear speed in inches per second

    b. Linear speed in feet per second

    c. Linear speed in feet per minute

6. If it took you 15 seconds to perform this task, then state each of the following

    a. Angular speed in radians per second

    b. Angular speed in radians per minute

7. You are pulling a cart and the cart's wheel is 40 inches in diameter and you notice that the wheel is making 4.8 revolutions per second
    a. Determine the angular speed of the cart's wheel (leave answer in radians/second)

    b. Determine the speed of the cart (give exact and approximate speed in inches/second)

    c. Determine the speed of the cart (give exact and approximate speed in feet/minute)

Name_____Hour_____ Color Chairs_____ Date_____

Formative Assessment on Revolutions, Arc Measurement, Linear Speed, and Angular Speed

You have a paint roller that has a diameter of 6 inches. You push the roller against the wall and it travels 2872°

1. What is the number of revolutions that the roller has travelled?

2. What is the measure of the angle in radians?

3. What is the length of arc that the roller travelled? Give as an exact answer as well as an approximate answer

4. If the paint on the roller was dispensed from the beginning of the motion, then how far on the wall have you painted (linearly)?

5. If it took you 45 seconds to perform this task, then state each of the following

    a. Linear speed in inches per second

    b. Linear speed in feet per second

    c. Linear speed in feet per minute

6. If it took you 45 seconds to perform this task, then state each of the following

    a. Angular speed in radians per second

    b. Angular speed in radians per minute

7. You are pulling a cart and the cart's wheel is 60 inches in diameter and you notice that the wheel is making 5.8 revolutions per second
    a. Determine the angular speed of the cart's wheel (leave answer in radians/second)

    b. Determine the speed of the cart (give exact and approximate speed in inches/second)

    c. Determine the speed of the cart (give exact and approximate speed in feet/minute)

Name_____Hour_____ Color Chairs_____ Date_____

Formative Assessment on Revolutions, Arc Measurement, Linear Speed, and Angular Speed

You have a paint roller that has a diameter of 8 inches. You push the roller against the wall and it travels 1242°

1. What is the number of revolutions that the roller has travelled?

2. What is the measure of the angle in radians?

3. What is the length of arc that the roller travelled? Give as an exact answer as well as an approximate answer

4. If the paint on the roller was dispensed from the beginning of the motion, then how far on the wall have you painted (linearly)?

5. If it took you 50 seconds to perform this task, then state each of the following

    a. Linear speed in inches per second

    b. Linear speed in feet per second

    c. Linear speed in feet per minute

6. If it took you 50 seconds to perform this task, then state each of the following

    a. Angular speed in radians per second

    b. Angular speed in radians per minute

7. You are pulling a cart and the cart's wheel is 80 inches in diameter and you notice that the wheel is making 6.8 revolutions per second
    a. Determine the angular speed of the cart's wheel (leave answer in radians/second)

    b. Determine the speed of the cart (give exact and approximate speed in inches/second)

    c. Determine the speed of the cart (give exact and approximate speed in feet/minute)