Lesson 3.5 Practice: Linear and Angular Speed

School Launch · Trigonometry · Unit 3: Angles, Radians and the Unit Circle · Worksheet A

Scientific calculator

Name _____ Date _____ Score _____ / 10

Show your work under each problem, one step per line, and check your answer. Word problems: name the unknown, write the equation, solve, and answer in a sentence with units.

1. A wheel of radius 3 in turns at 186 revolutions per minute. Find its angular speed (rad/min, exact) and the linear speed of a point on the rim (in/min, nearest whole).

EASY

2. A wheel of radius 12 in turns at 133 revolutions per minute. Find its angular speed (rad/min, exact) and the linear speed of a point on the rim (in/min, nearest whole).

EASY

3. A wheel of radius 4 in turns at 68 revolutions per minute. Find its angular speed (rad/min, exact) and the linear speed of a point on the rim (in/min, nearest whole).

EASY

4. A wheel of radius 17 in turns at 70 revolutions per minute. Find its angular speed (rad/min, exact) and the linear speed of a point on the rim (in/min, nearest whole).

MEDIUM

5. A wheel of radius 13 in turns at 259 revolutions per minute. Find its angular speed (rad/min, exact) and the linear speed of a point on the rim (in/min, nearest whole).

MEDIUM

6. A wheel of radius 3 in turns at 155 revolutions per minute. Find its angular speed (rad/min, exact) and the linear speed of a point on the rim (in/min, nearest whole).

MEDIUM

7. A wheel of radius 15 in turns at 134 revolutions per minute. Find its angular speed (rad/min, exact) and the linear speed of a point on the rim (in/min, nearest whole).

MEDIUM

8. A wheel of radius 9 in turns at 70 revolutions per minute. Find its angular speed (rad/min, exact) and the linear speed of a point on the rim (in/min, nearest whole).

HARD

9. A wheel of radius 25 in turns at 171 revolutions per minute. Find its angular speed (rad/min, exact) and the linear speed of a point on the rim (in/min, nearest whole).

HARD

10. A wheel of radius 28 in turns at 66 revolutions per minute. Find its angular speed (rad/min, exact) and the linear speed of a point on the rim (in/min, nearest whole).

HARD