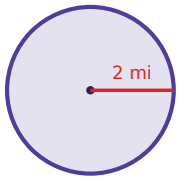
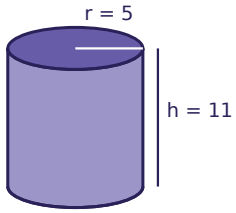
Task card 1 Density: Modeling with Area & Volu...

The people of Cedar Grove live within 2 miles of the town center, in a circular region. There are 92000 people. Find the population density in people per square mile.



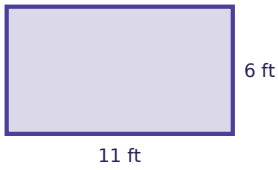
Task card 2 Density: Modeling with Area & Volu...

A cylinder of copper has radius 5 cm and height 11 cm. The density of copper is 8.9 grams per cubic centimeter. Find its mass in grams.



Task card 3 Density: Modeling with Area & Volu...

New flooring for a room 11 ft by 6 ft costs $485. Find the cost per square foot, in dollars.



Task card 4 Density: Modeling with Area & Volu...

A piece of glass has a mass of 890 grams. The density of glass is 2.5 grams per cubic centimeter. Find its volume in cubic centimeters.

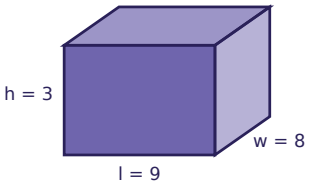
Task card 5 Density: Modeling with Area & Volu...

A county is a rectangle 5 miles by 7 miles. Its population density is 1435 people per square mile. About how many people live there?



Task card 6 Density: Modeling with Area & Volu...

A block is 9 cm by 8 cm by 3 cm and has a mass of 191 grams. Find its density in grams per cubic centimeter.

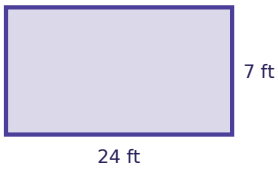


Task card 7 Density: Modeling with Area & Volu...

Town A has 51100 people on 42 square miles. Town B has 14900 people on 4 square miles. Which town has the greater population density, A or B?

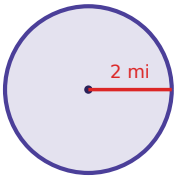
Task card 8 Density: Modeling with Area & Volu...

Carpet costs $10.00 per square foot. How many dollars does it cost to carpet a room 24 ft by 7 ft?



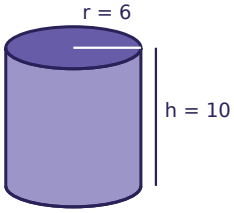
Task card 9 Density: Modeling with Area & Volu...

The people of Oak Hill live within 2 miles of the town center, in a circular region. There are 24000 people. Find the population density in people per square mile.



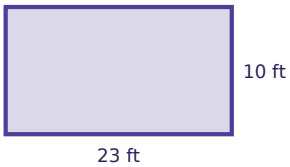
Task card 10 Density: Modeling with Area & Volu...

A cylinder of iron has radius 6 cm and height 10 cm. The density of iron is 7.9 grams per cubic centimeter. Find its mass in grams.



Task card 11 Density: Modeling with Area & Volu...

New flooring for a room 23 ft by 10 ft costs $3375. Find the cost per square foot, in dollars.



Task card 12 Density: Modeling with Area & Volu...

A piece of ice has a mass of 480 grams. The density of ice is 0.9 grams per cubic centimeter. Find its volume in cubic centimeters.

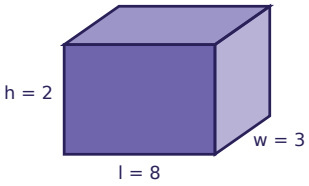
Task card 13 Density: Modeling with Area & Volu...

A county is a rectangle 4 miles by 6 miles. Its population density is 1820 people per square mile. About how many people live there?



Task card 14 Density: Modeling with Area & Volu...

A block is 8 cm by 3 cm by 2 cm and has a mass of 925 grams. Find its density in grams per cubic centimeter.

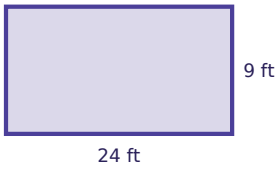


Task card 15 Density: Modeling with Area & Volu...

Town A has 18700 people on 10 square miles. Town B has 26600 people on 39 square miles. Which town has the greater population density, A or B?

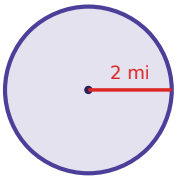
Task card 16 Density: Modeling with Area & Volu...

Carpet costs $8.50 per square foot. How many dollars does it cost to carpet a room 24 ft by 9 ft?



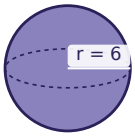
Task card 17 Density: Modeling with Area & Volu...

The people of Oak Hill live within 2 miles of the town center, in a circular region. There are 88500 people. Find the population density in people per square mile.



Task card 18 Density: Modeling with Area & Volu...

A solid ball of ice has radius 6 cm. The density of ice is 0.9 grams per cubic centimeter. Find its mass in grams.



Task card 19 Density: Modeling with Area & Volu...

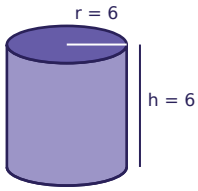
Town A has 24700 people on 10 square miles. Town B has 16300 people on 4 square miles. Which town has the greater population density, A or B?

Task card 20 Density: Modeling with Area & Volu...

A piece of gold has a mass of 260 grams. The density of gold is 19.3 grams per cubic centimeter. Find its volume in cubic centimeters.

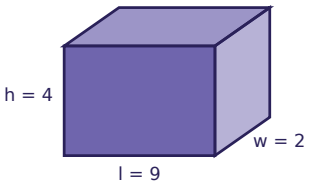
Task card 21 Density: Modeling with Area & Volu...

A cylinder of ice has radius 6 cm and height 6 cm. The density of ice is 0.9 grams per cubic centimeter. Find its mass in grams.



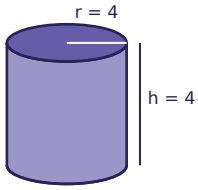
Task card 22 Density: Modeling with Area & Volu...

A block is 9 cm by 2 cm by 4 cm and has a mass of 67 grams. Find its density in grams per cubic centimeter.



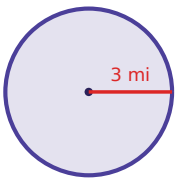
Task card 23 Density: Modeling with Area & Volu...

A solid cylinder has radius 4 cm, height 4 cm and a mass of 2113 grams. Find its density in grams per cubic centimeter.



Task card 24 Density: Modeling with Area & Volu...

The people of Brookside live within 3 miles of the town center, in a circular region. There are 87500 people. Find the population density in people per square mile.



Density: Modeling with Area & Volume Task Cards

Recording sheet · Grade 10 · Write just the number, with no units, rounded to the nearest tenth (like 162.0 or 37.5; 162 is also fine). Use the π key on a calculator for circles, cylinders and spheres. When asked which town, answer A or B.

Scan to check your answers

Name: _____ Date: _____

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24

Density: Modeling with Area & Volume Task Cards: Answer Key

Grade 10 · Medium

The answers online

1. 7321.1	**2.** 7689.0	**3.** 7.3
4. 356.0	**5.** 50225.0	**6.** 0.9
7. B	**8.** 1680.0	**9.** 1909.9
10. 8934.7	**11.** 14.7	**12.** 533.3
13. 43680.0	**14.** 19.3	**15.** A
16. 1836.0	**17.** 7042.6	**18.** 814.3
19. B	**20.** 13.5	**21.** 610.7
22. 0.9	**23.** 10.5	**24.** 3094.7