

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Problem-Solving and Data Analysis	Ratios, rates, proportional relationships, and units	Hard

ID: 0f1d42fd



The density of a certain type of wood is ~~353~~ kilograms per cubic meter. A sample of this type of wood is in the shape of a cube and has a mass of ~~345~~ kilograms. To the nearest hundredth of a meter, what is the length of one edge of this sample?

- A. 0.98
- B. 0.99
- C. 1.01
- D. 1.02

Question ID 7989c1bb

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ID: 7989c1bb

A certain town has an area of 4.36 square miles. What is the area, in square yards, of this town? (1 mile = 1,760 yards)

- A. 404
- B. 7,674
- C. 710,459
- ~~D. 13,505,536~~

4.36 m^2
take $\sqrt{} = 2.0881 \text{ m}$
 $= 3,645 \text{ y}$
Power 2 = $13,505,536 \text{ y}^2$

Question ID ea2c91c1

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ID: ea2c91c1

ฟิสิกส์ ยาก อยู่นู่ Topic 2

For an electric field passing through a flat surface perpendicular to it, the electric flux of the electric field through the surface is the product of the electric field's strength and the area of the surface. A certain flat surface consists of two adjacent squares, where the side length, in meters, of the larger square is 3 times the side length, in meters, of the smaller square. An electric field with strength 29.00 volts per meter passes uniformly through this surface, which is perpendicular to the electric field. If the total electric flux of the electric field through this surface is 4,640 volts · meters, what is the electric flux, in volts · meters, of the electric field through the larger square?

$$F = SA$$

$$L_L = 3L_S$$
$$S = 29$$
$$F = 4,640$$

$$F = S(A_L + A_S)$$
$$4,640 = 29((3L_S)^2 + L_S^2)$$
$$4,640 = 29(10L_S^2)$$
$$L_S = 4 \quad / \quad L_L = 3(4)$$
$$ = 12$$

$$F = SA_L$$
$$= 29(12)^2$$
$$= 4,176 //$$

Question ID 424cddc9

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ID: 424cddc9

မေးခွန်း Topic 4

To study the moisture content in a group of trees, samples from the trunk of each tree were taken from 25 trees and cut in the shape of a cube. The length of the edge of one of these cubes is 2.00 centimeters. If this cube has a mass of 2.56 grams, what is the density of this cube, in grams per cubic centimeter?

$$\begin{aligned} D &= \frac{2.56}{2^3} \\ &= 0.32 // \end{aligned}$$

Question ID 6963dfb3

Assessment	Test	Domain	Skill	Difficulty
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ID: 6963dfb3

A landscaper uses a hose that puts 88x ounces of water in a bucket in 5y minutes. Which expression represents the number of ounces of water the hose puts in the bucket in 9y minutes at this rate?

A. $\frac{9x}{440}$

B. $\frac{440x}{9}$

C. $\frac{5x}{792}$

~~D. $\frac{792x}{5}$~~

min

5y

9y

00h

88x

$$\frac{9y(88x)}{5y} = \frac{792}{5}x //$$

Question ID c6ad6232

Assessment	Test	Domain	Skill	Difficulty
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ID: c6ad6232

Objects R and S each travel at a constant speed. The speed of object R is half the speed of object S. Object R travels a distance of $4x$ inches in y seconds. Which expression represents the time, in seconds, it takes object S to travel a distance of $24x$ inches?

- A. $12y$
- ~~B. $3y$~~
- C. $16y$
- D. $6y$

$$V_R = \frac{1}{2} V_S$$
$$\frac{1}{2} V_S = \frac{4x}{y}$$
$$\times 2 \quad V_S = \frac{8x}{y}$$

$$\begin{array}{r} S \\ 8x \\ 24x \end{array}$$

$$\begin{array}{r} t \\ y \\ 3y \\ // \end{array}$$

สำหรับ Object S

$$V = \frac{S}{t}$$

Question ID 00048e15

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ID: 00048e15



If $\frac{4a}{b} = 6.7$ and $\frac{a}{bn} = 26.8$, what is the value of n ?

Question ID 335fc7f5

Assessment	Test	Domain	Skill	Difficulty
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ID: 335fc7f5

A certain park has an area of 11,863,808 square yards. What is the area, in square miles, of this park?
(1 mile = 1,760 yards)

- A. 1.96
~~B. 3.83~~
C. 3,444.39
D. 6,740.8

$$\begin{aligned} \text{take } \sqrt{\quad} &= 3,444.3879 \quad y \\ &\quad y \quad m \\ &1,760 \quad 1 \\ 3,444.3879 &1.9570 \quad m \\ &= 1.9570 \quad m \\ \text{Power 2} &= 3.83 \quad m^2 // \end{aligned}$$

Question ID 03c75a33

Assessment	Test	Domain	Skill	Difficulty
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ID: 03c75a33

The area of a rectangular region is increasing at a rate of 250 square feet per hour. Which of the following is closest to this rate in square meters per minute? (Use 1 meter = 3.28 feet.)

- ~~X~~ 0.39
- B. 1.27
- C. 13.67
- D. 23.24

per hour

$$\left\{ \begin{array}{l} = 5\sqrt{10} \text{ f} \\ \begin{array}{cc} \text{f} & \text{m} \\ 3.28 & 1 \\ 5\sqrt{10} & 4.8205 \end{array} \\ = 4.8205 \text{ m} \\ = 23.2377 \text{ m}^2 \\ \\ = \frac{23.2377}{60} \frac{\text{m}^2}{\text{min}} \\ = 0.3873 \\ \approx 0.39 // \end{array} \right.$$

Question ID 56effdcf

Assessment	Test	Domain	Skill	Difficulty
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ID: 56effdcf

The speed of a vehicle is increasing at a rate of 7.3 meters per second squared. What is this rate, in miles per minute squared, rounded to the nearest tenth? (Use 1 mile = 1,609 meters.)

- A. 0.3
- ~~B. 16.3~~
- C. 195.8
- D. 220.4

me mi
1,609 1
7.3 0.0045
= 0.0045 mi / s²
= 0.0045 mi /
 (1/60)² m²
= 16.3331 mi / m²
≈ 16.3

Question ID 68c9e1f7

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ID: 68c9e1f7

หัวข้อ Topic 4

A sample of oak has a density of 807 kilograms per cubic meter. The sample is in the shape of a cube, where each edge has a length of 0.90 meters. To the nearest whole number, what is the mass, in kilograms, of this sample?

- ~~A. 588~~
- B. 726
- C. 897
- D. 1,107

$$807 = \frac{m}{0.9^3}$$
$$m = 588.303$$
$$\approx 588 //$$

Question ID 0035c393

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ID: 0035c393

หน่วย Topic 4

The density of a certain solid substance is 813 kilograms per cubic meter. A sample of this substance is in the shape of a cube, where each edge has a length of 0.60 meters. To the nearest whole number, what is the mass, in kilograms, of this sample?

- ~~A. 176~~
- B. 488
- C. 1,355
- D. 3,764

$$813 = \frac{m}{0.6^3}$$
$$m = 175.608$$
$$\approx 176 //$$

Question ID 63b7be29

Assessment	Test	Domain	Skill	Difficulty
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ID: 63b7be29



To study fluctuations in composition, samples of pumice were taken from **29** locations and cut in the shape of a cube. The length of the edge of one of these cubes is **3.000** centimeters. This cube has a density of **0.230** grams per cubic centimeter. What is the mass of this cube, in grams?