

Name: _____

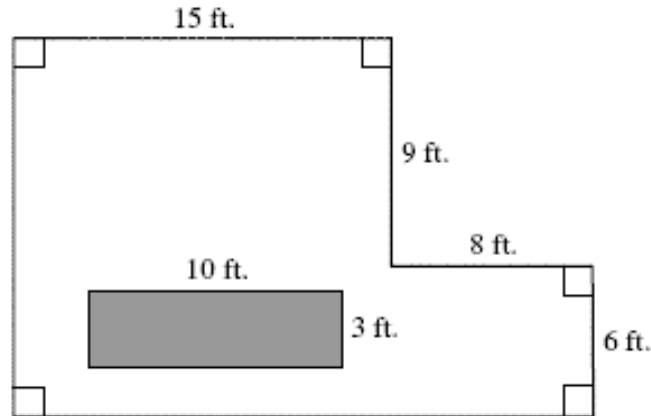
2005, Mathematics - Grade 10

Question 40: Multiple Choice

Measurement



How many square feet of carpeting are needed to cover the floor of the room represented by the drawing below? Note that the shaded region is to be left uncovered to leave space for the construction of a built-in trophy case with a rectangular base.



- A. 125 sq. ft.
- B. 243 sq. ft.
- C. 273 sq. ft.
- D. 303 sq. ft.

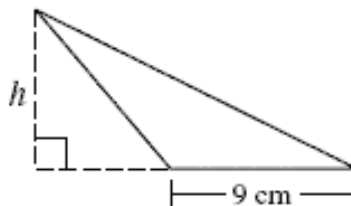
2005, Mathematics - Grade 10

Question 24: Multiple Choice

Measurement



What is h , the height of the triangle represented below, if its area is 58.5 square centimeters?



- A. 13 cm
- B. 18 cm
- C. 26 cm
- D. 39 cm

Name: _____

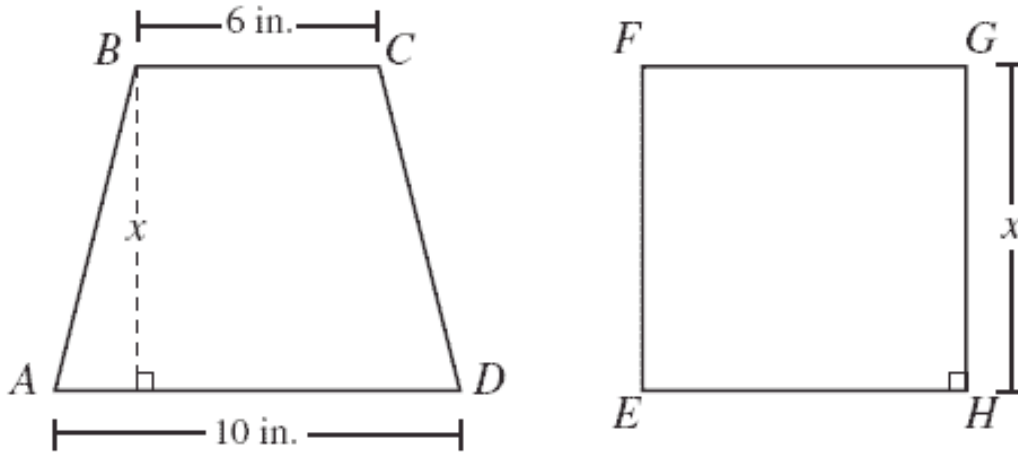
2005, Mathematics - Grade 10

Question 15: Short Answer



Measurement

Trapezoid $ABCD$ shown below has bases measuring 6 inches and 10 inches and a height of x inches. Square $EFGH$ shown below has sides measuring x inches. The trapezoid and the square have equal areas.



What is the value of x , in inches?

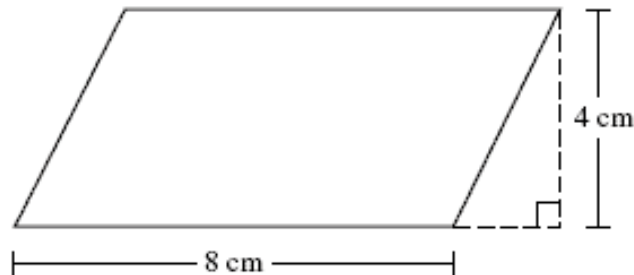
2005, Mathematics - Grade 10

Question 9: Multiple Choice



Measurement

What is the area of the parallelogram represented below?



- A. 32 cm^2
- B. 24 cm^2
- C. 16 cm^2
- D. 12 cm^2

Name: _____

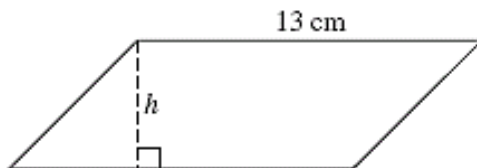
2004, Mathematics - Grade 10

Question 22: Multiple Choice

Measurement



What is h , the height of the parallelogram represented below, if its area is 91 square centimeters?



- A. 7 cm
- B. 9 cm
- C. 11 cm
- D. 15 cm

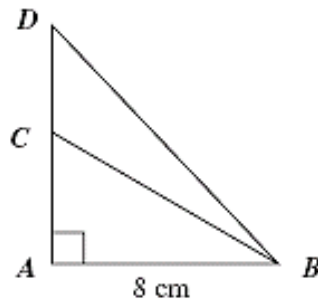
2003, Mathematics - Grade 10

Question 18: Short Answer

Measurement



In the figure below, A , C , and D are collinear, the area of $\triangle ABC$ is 24 square centimeters, and the area of $\triangle ABD$ is 40 square centimeters. If the measure of \overline{AB} is 8 centimeters, what is the length of \overline{DC} ?



2003, Mathematics - Grade 10

Question 11: Multiple Choice

Patterns, Relations, and Algebra



A rectangle has a perimeter of 44 inches and an area of 72 square inches. What are the lengths of the sides of the rectangle?

- A. 2 inches and 36 inches
- B. 4 inches and 18 inches
- C. 8 inches and 9 inches
- D. 11 inches and 11 inches

Name: _____

2001, Mathematics - Grade 10

Question 28: Multiple Choice

Measurement



Which expression represents the area of the shaded portion of the square below?



- A. $n^2 - \pi n$
- B. $n^2 - 2\pi n$
- C. $n^2 - (\pi n^2)$
- D. $n^2 - \left(\frac{n}{2}\right)^2 \pi$

2000, Mathematics - Grade 10

Question 6: Multiple Choice

Geometry



The lawn in Lori's backyard is a 30-foot by 50-foot rectangle. Lori converts part of the lawn to a circular garden 8 feet in diameter. What fractional part of her backyard is garden space?

- A. $\frac{16\pi}{1,500}$
- B. $\frac{64\pi}{1,500}$
- C. $\frac{8\pi}{1,500}$
- D. $\frac{8\pi}{1,550 - 8\pi}$

Name: _____

1998, Mathematics - Grade 10

Question 36: Open Response



Geometry

- a. What is the area of waste (shaded area) after cutting the largest possible circular area from a 28" square of sheet metal as shown in Figure 1? Show your work.
- b. What is the area of waste (shaded area) after cutting the four largest possible circular areas from a 28" square of sheet metal as shown in Figure 2? Show your work.
- c. What general expression can you use to find the amount of waste when cutting n^2 circles of equal size from a square piece of sheet metal measuring 28" on a side?

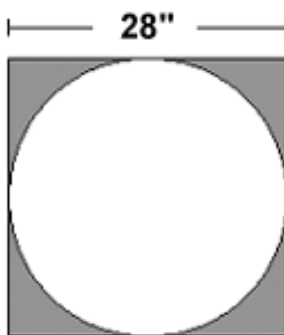


Figure 1

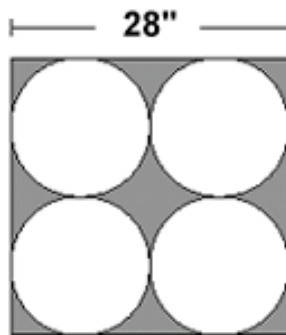


Figure 2

1998, Mathematics - Grade 10

Question 25: Multiple Choice



Patterns, Relations, and Algebra

If the area of a rectangle is $8x^2 - 12x$, the dimensions of the rectangle could be

- A. $2x$ and $(x - 3)$.
- B. $4x$ and x .
- C. $4x$ and $(2x - 3)$.
- D. $4x$ and $(x - 3)$.