Name_____ Session 1 2 3 (Circle one) Date_____

1.

What is the slope of the linear equation $101x + 53y = 12$?

F -101

G $\frac{12}{53}$

H $-\frac{101}{53}$

J $\frac{12}{101}$

2.

The table below shows the value of a term in a given position in a sequence of numbers that follows a pattern.

Position	Value of Term
1	$-2\frac{1}{2}$
2	-1
3	$1\frac{1}{2}$
4	5
5	$9\frac{1}{2}$
n	?

Which expression best represents the value of the nth term?

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F $\frac{n^2}{2} - 3$

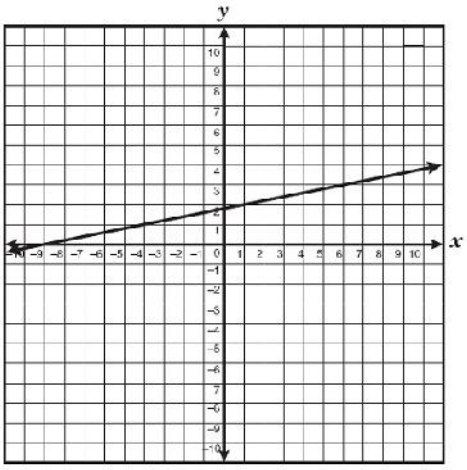
G $\frac{n^2 - 11}{4}$

H $\frac{3n^2}{2} - 4$

J $\frac{2n^2 - 17}{6}$

3.

The graph of $-x + 5y = 9$ is shown below.



Which point represents a solution to this equation?

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A (0, 1)

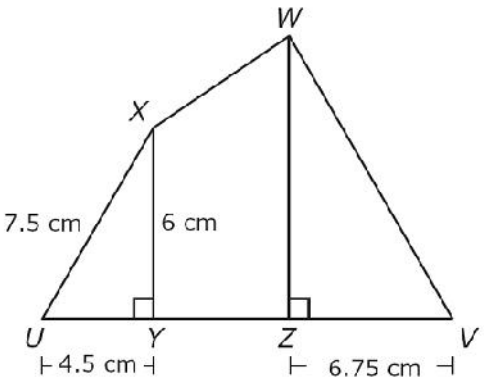
B (2, 1)

C (1, 2)

D (−7, 0)

4.

Quadrilateral $UVWX$ is shown below.



If ΔUYX and ΔVZW are similar, which of the following is closest to the area of ΔVZW?

F 61 cm^2

G 38 cm^2

H 30 cm^2

J 9 cm^2

5.

In Figure 1 a cylinder with a diameter of 12 centimeters is filled with water to a height of 8 centimeters.

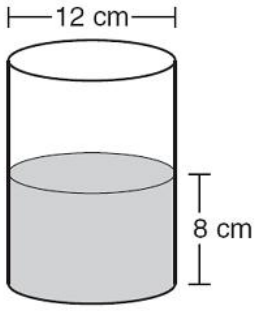


Figure 1

In Figure 2 a rock is submerged in the cylinder.

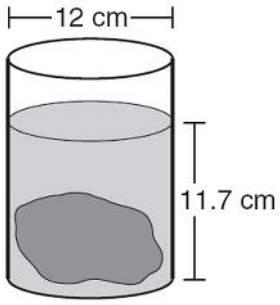


Figure 2

Which of the following is closest to the volume of the rock?

F $139\ cm^3$

G $418\ cm^3$

H $1674\ cm^3$

J $1323\ cm^3$

6.

A basketball player made 12 free throws in his last 36 attempts. How many free throws would the basketball player be expected to make in 78 attempts?

F 20

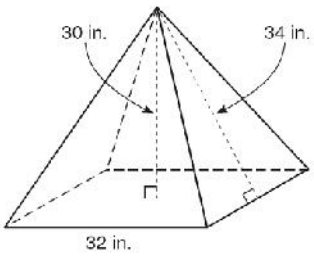
G 26

H 52

J 234

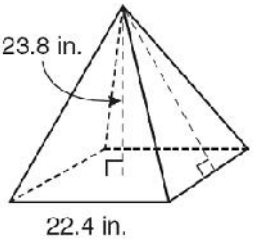
7.

The figure below shows a square pyramid with a base length of 32 inches and a slant height of 34 inches.

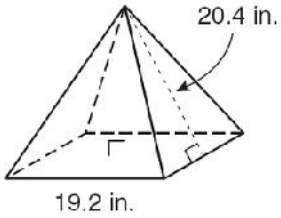


Which of the following square pyramids is similar to the square pyramid above?

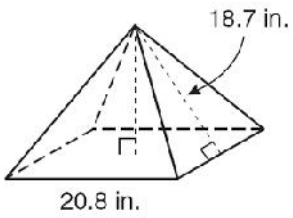
F



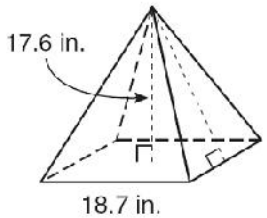
H



G



J



8.

Which algebraic expression is equivalent to the phrase "5 less than the sum of x and y"?

A $(x + y) - 5$

B $(x - y) + 5$

C $5 - (x + y)$

D $5 - x + y$