

# Praxis Review - Form 2

#1

Answer the question below by clicking on the correct response.

The population of Country X is 0.36 billion persons, and the population of Country Z is 12 million persons. The population of Country X is how many times that of Country Z?

- 300
- 30
- 0.3
- 0.03

Sci Not

$$\begin{aligned} 0.36 \times 10^9 &= 3.6 \times 10^8 \\ 12 \times 10^6 &= 1.2 \times 10^7 \end{aligned}$$

$$\begin{aligned} \therefore \frac{3.6 \times 10^8}{1.2 \times 10^7} &= 3 \times 10^1 \\ &= 30 \end{aligned}$$

# Praxis Review - Form 2

#2

Click on the answer box and type in a number. Backspace to erase.

A rectangular lawn is 40 feet wide and 65 feet long. If a bag of fertilizer covers 10,400 square feet, what is the maximum number of times the lawn can be completely fertilized using a single bag of fertilizer?



$$\begin{aligned} A &= lw \\ &= 65 \cdot 40 \\ &= 2600 \text{ sq'} \end{aligned}$$

1 Bag 10,400 sq'

$$\begin{array}{r} 2600 \overline{) 10,400} \\ \underline{4} \\ 26 \overline{) 104} \end{array}$$

4 times

# Praxis Review - Form 2

#3

Answer the question below by clicking on the correct response.

Marta has \$88 in a jar. If she adds \$6 each week to the money already in the jar without withdrawing any money, in how many weeks will she have a total of \$142 in the jar?

- 7
- 8
- 9
- 10

$$142 = 88 + 6w$$

$$54 = 6w$$

$$9 = w$$

# Praxis Review - Form 2

#4

Answer the question below by clicking on the correct response.

DISTANCE BETWEEN CITIES  
(in miles)

	Boston	Dallas	Denver	Omaha	Seattle
Boston	—	1,753	1,998	1,469	3,016
Dallas	1,753	—	784	662	2,131
Denver	1,998	784	—	541	1,341
Omaha	1,469	662	541	—	1,692
Seattle	3,016	2,131	1,341	1,692	—

The table shows the distances between selected cities. Joni will travel directly from Boston to Seattle. Gerry will travel from Boston to Denver and then from Denver to Seattle. How many more miles will Gerry travel than Joni?

- 323
- 657
- 1,018
- 1,341

Joni

Gerry

$$\begin{array}{r} \text{TOTAL} \\ 3016 \text{ mi} \\ 1998 - 1341 \quad 3339 \text{ mi} \\ \hline 3339 \\ - 3016 \\ \hline 323 \text{ mi} \end{array}$$

# Praxis Review - Form 2

#5

Click on each box and type in a number. Backspace to erase.

In a collection of writing utensils consisting of pens and pencils, 64% of the writing utensils are pens. What is the ratio of pens to pencils in the collection?

Give your answer as a fraction.

64% - pens  $\therefore$  36% pencils

$$\frac{\text{pens}}{\text{pencils}} = \frac{64}{36} = \frac{16}{9}$$

16 to 9

# Praxis Review - Form 2

#6

Answer the question below by clicking on the correct response.

Which of the following represents the x-intercept and the y-intercept of the graph of the equation  $3x - 4y = 12$  in the xy-plane?

$(-4, 0)$  and  $(0, 3)$

$(-3, 0)$  and  $(0, 4)$

$(3, 0)$  and  $(0, -4)$

$(4, 0)$  and  $(0, -3)$

$X_{int}$  occurs when  $y=0$

$Y_{int}$  occurs when  $x=0$

$$3x - 4y = 12$$

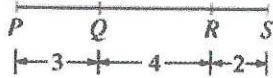
$$Y_{int} = -3 \quad (0, -3)$$

$$X_{int} = 4 \quad (4, 0)$$

# Praxis Review - Form 2

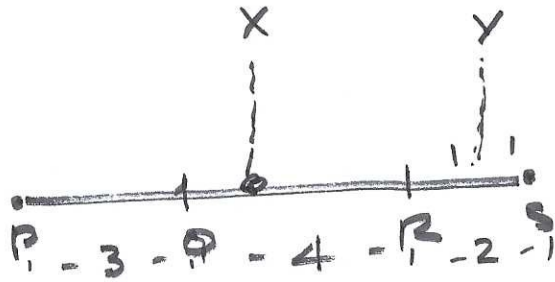
#7

Answer the question below by clicking on the correct response.



On line segment  $PS$  shown, point  $X$ , not shown, is the midpoint of segment  $PR$ , and point  $Y$ , not shown, is the midpoint of segment  $RS$ . Which of the following line segments has the greatest length?

- QY
- QR
- XY
- XR



if  $PR = 7$ , then  $PX = XR = 3\frac{1}{2}$

$$QY = 5$$

$$QR = 4$$

$$XY = 8 - 3\frac{1}{2} = 4\frac{1}{2}$$

$$XR = 3\frac{1}{2}$$

$$QY$$

# Praxis Review - Form 2

#8

Answer the question below by clicking on the correct response.

BOSTON BROWN BREAD

$2\frac{1}{2}$ cups whole-wheat flour	2 teaspoons baking soda
$1\frac{1}{4}$ cups rye flour	2 cups buttermilk
1 cup cornmeal	$\frac{3}{4}$ cup molasses
$2\frac{1}{2}$ teaspoons baking powder	$1\frac{2}{3}$ cups raisins
$1\frac{1}{4}$ teaspoons salt	

The recipe shown makes 2 loaves of Boston brown bread. If  $2\frac{1}{4}$  cups of molasses are used and all other ingredients are increased proportionally, how many loaves of Boston brown bread will be made?

- 3
- 4
- 5
- 6

$$2\frac{1}{4} \text{ cps mol.} = \frac{9}{4} \quad \underline{2 \text{ Bread}}$$

$$\left| \frac{3}{4} \text{ cps mol} \quad - \quad 2 \text{ Bread} \right|$$

$$2\frac{1}{4} \div \frac{3}{4}$$

$$\frac{9}{4} \div \frac{3}{4}$$

$$\frac{9}{4} \times \frac{4}{3} = \frac{9}{3} = 3$$

3 Bread



# Praxis Review - Form 2

#9

Click on each box and type in a number. Backspace to erase.

When the linear equation  $2x - 5y = -20$  is graphed in the  $xy$ -plane, what is the slope of the line?

Give your answer as a fraction.

$$Ax + By = C \quad m = -\frac{A}{B}$$

$$2x - 5y = -20$$

$$m = \frac{-2}{-5} = \frac{2}{5}$$

OR

Solve for  $y$

$$2x - 5y = -20$$

$$2x + 20 = 5y$$

$$\frac{2}{5}x + 4 = y$$

$$y = mx + b$$

$$m = \frac{2}{5}$$

# Praxis Review - Form 2

#10

Answer the question below by clicking on the correct response.

For inventory purposes, a manufacturing company assigns a 3-character code to each different item produced. The first character of the code must be a letter from the 26-letter English alphabet. The second and third characters must each be a digit from 0 to 9, but the digit cannot be repeated. How many different 3-character codes can be assigned?

- 720
- 2,340
- 2,600
- 15,600

Counting use FCP

$$26 \cdot 10 \cdot 9 = 2340$$

# Praxis Review - Form 2

#11

Click on your choices.

Which of the following equations demonstrate the associative property of addition or the associative property of multiplication?

Select all that apply.

$v + 2 = 2 + v$  CP

$4(w + 1) = 4w + 4$  DP

$(2 + x) + 5 = 2 + (x + 5)$  A

$wy = yw$  CR

$x(yz) = (xy)z$  A

Assoc. changes groups

$$(a + b) + c = a + (b + c)$$

# Praxis Review - Form 2

#12

Answer the question below by clicking on the correct response.

$$\frac{1}{2}n(n-3)$$

The expression shown gives the number of diagonals in a polygon with  $n$  sides, where  $n$  is an integer. Which of the following expressions is equivalent to the expression shown?

$\frac{n^2}{2} + 3$

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

$\frac{n^2}{2} + \frac{3n}{2}$

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

$$\frac{1}{2}n(n-3)$$

$$= \frac{1}{2}n^2 - \frac{3n}{2}$$

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

# Praxis Review - Form 2

#13

Click on your choices.

Which of the following pairs of fractions are equivalent?

Select all that apply.

$\frac{3}{5}$  and  $\frac{9}{25}$

$\frac{5}{6}$  and  $\frac{11}{12}$

$\frac{4}{7}$  and  $\frac{24}{42}$

$\frac{5}{8}$  and  $\frac{13}{20}$

$\frac{8}{12}$  and  $\frac{14}{21}$

if  $\frac{a}{b} = \frac{c}{d}$ , then  
 $ad = bc$

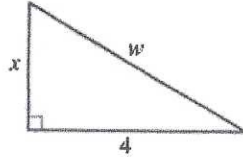
(168)      168  
 $\frac{4}{7} = \frac{24}{42}$

(168)      (68)  
 $\frac{8}{12} = \frac{14}{21}$

# Praxis Review - Form 2

#14

Answer the question below by clicking on the correct response.



Based on the information in the right triangle shown, which of the following expressions is equivalent to  $x$ ?

$w - 4$

$w + 4$

$\sqrt{w^2 - 16}$

$\sqrt{w^2 + 16}$

Py Thm

$$c^2 = a^2 + b^2$$

$$w^2 = x^2 + 4^2$$

$$w^2 - 16 = x^2$$

$$\sqrt{w^2 - 16} = x$$

# Praxis Review - Form 2

#15

Click on your choices.

Which of the following sets of ordered pairs  $(x, y)$  define  $y$  as a function of  $x$ ?

Select all that apply.

$\{(1, 3), (2, 3), (3, 5), (4, 5)\}$

$\{(2, 1), (3, 2), (4, 3), (5, 4)\}$

$\{(3, 1), (3, 2), (5, 3), (5, 4)\}$

Fct for every  $x$ , there  
is exactly 1  $y$

In other words,  $x$   
can not repeat with  
a different  $y$