Praxis Review - Form 2

#16

Answer the question below by clicking on the correct response.

Cameron wants to create a display that shows how much a gallon of regular unleaded gasoline at a certain gas station costs at 8 A.M. each day over a two-week period. Which of the following is the most appropriate type of graph for him to use to display the data?

- ◯ Bar graph
- ◯ Circle graph
- ✓ Line graph
- ◯ Pictograph

Praxis Review - Form 2

#17

Answer the question below by clicking on the correct response.

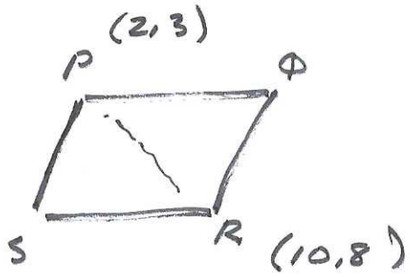
In the *xy*-coordinate plane, quadrilateral *PQRS* is a rhombus. The endpoints of diagonal $\overline{PR}$ have coordinates $(2, 3)$ and $(10, 8)$. What is the slope of diagonal $\overline{QS}$?

- ○ $-\frac{8}{5}$
- ○ $-\frac{7}{6}$
- ○ $\frac{7}{6}$
- ○ $\frac{8}{5}$

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

Diagonals of rhombus are ⊥

→ neg recip slope



$$m_{PR} = \frac{8-3}{10-2} = \frac{5}{8}$$

$$\therefore \; m_{SQ} = -\frac{8}{5}$$

Praxis Review - Form 2

#18

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

A line in the xy-plane passes through the points $(-2, -7)$ and $(3, 3)$. When the equation of the line is written in the form $y = mx + b$, what are the values of m and b?

$m =$ ☐

$b =$ ☐

Eqn of line $y - y_1 = m(x - x_1)$

need to know a pt and slope

$$m = \frac{3-(-7)}{3-(-2)} = \frac{10}{5} = 2$$

$$y - 3 = 2(x - 3)$$

$$y - 3 = 2x - 6$$

$$y = 2x - 3$$

$m = 2 \quad b = -3$

Praxis Review - Form 2

#19

Answer the question below by clicking on the correct response.

The houses along one side of a certain street are numbered with consecutive even integers, and the houses on the other side of the street are numbered with consecutive odd integers. The first house on the street is numbered 8, and the last house on the street is numbered 34. How many houses are on the even-numbered side of the street?

- ○ 12
- ○ 13
- ○ 14
- ○ 15

Address ; add 1
to include 1st house

8 - 34

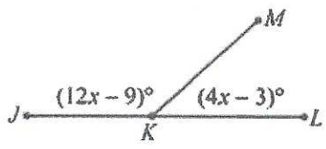
34
− 8
26 houses

each side 13
÷ 2
Add 1 —> 14

Praxis Review - Form 2

#20

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



In the figure shown, line segment *KM* intersects line segment *JL* at point *K*. What is the value of *x*?

$x =$ ☐

Straight ∠ = 180°

$12x - 9 + 4x - 3 = 180$

$16x - 12 = 180$

$16x = 192$

$x = 12$

Praxis Review - Form 2

#21

Answer the question below by clicking on the correct response.

In the xy-plane, the slope of a line is $\frac{1}{3}$, and the y-intercept of the line is 4. Which of the following is an equation of the line?

- ○ $3y - x = 4$
- ✓ $3y - x = 12$
- ○ $3y - 3x = 3$
- ○ $3y + 4x = 12$

$y = mx + b$

$y = \frac{1}{3}x + 4$

Mult by CD · 3

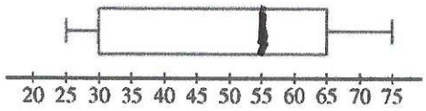
$3y = x + 12$

$3y - x = 12$

Praxis Review - Form 2

#22

Answer the question below by clicking on the correct response.



The manager of a music store recorded the number of customers who entered the store each day over a 14-day period. A different number of customers entered the store on each of the days. The results are summarized in the boxplot above. Which of the following conclusions can be made based on the data shown?

- ◯ Fewer than 55 customers entered the store on more than half of the days.
- ◯ Between 30 and 55 customers entered the store on half of the days.
- ◯ The number of days that 30 or fewer customers entered the store was equal to the number of days that 65 or more customers entered the store.
- ◯ The average (arithmetic mean) number of customers who entered the store each day was greater than 55.

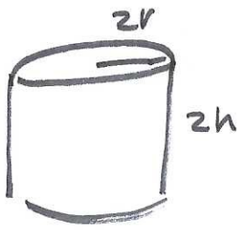
Praxis Review - Form 2

#23

Answer the question below by clicking on the correct response.

A large right circular cylinder has a radius and height that are each twice the size of the radius and height of a small right circular cylinder. The volume of the large cylinder is how many times the volume of the small cylinder?

- ○ 2
- ○ 4
- ○ 6
- ○ 8



$V = \pi (2r)^2 2h$

$= \pi 4r^2 \cdot 2h$

$= 8\pi r^2 h$

$V = \pi r^2 h$

$\therefore \Rightarrow \dfrac{8\pi r^2 h}{\pi r^2 h} = 8$

Praxis Review - Form 2

#24

Answer the question below by clicking on the correct response.

x	$f(x)$	$g(x)$
1	4	2
2	1	3
3	5	4
4	1	1
5	2	4

The table shows the complete definitions of the functions f and g. What is the value of $f(g(3))$?

- ○ 1
- ○ 2
- ○ 4
- ○ 5

$g(3) = 4$

$f(g(3)) = f(4) = 1$

Praxis Review - Form 2

#25

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

From 8 A.M. to 12 noon on a cold day, the temperature rose at a constant rate from −18 degrees Fahrenheit to 34 degrees Fahrenheit. What was the temperature, in degrees Fahrenheit, at 10 A.M. that day?

[ ] degrees Fahrenheit

−18 to 34 → 52 degree change

52 over 4 hr

$52/4 = 13$ deg./hr

8a	9a	10a
−18	−5	8

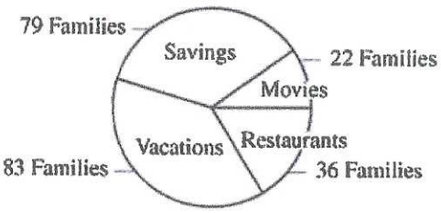
8 degree

Praxis Review - Form 2

#26

Answer the question below by clicking on the correct response.

DISTRIBUTION OF 220 FAMILIES
BY SPENDING CATEGORY



The circle graph shows the results of a survey of 220 families regarding how they primarily spend extra income. What is the measure, in degrees, of the central angle for the sector representing the families who primarily spend their extra income on movies?

- ○ 10°
- ○ 22°
- ○ 36°
- ○ 59°

Movies - 22 Families

$\frac{22}{220} = 10\%$

$10\% \text{ of } 360 = 36^\circ$

Praxis Review - Form 2

#27

Answer the question below by clicking on the correct response.

A light display for a festival consists of a string of 1,000 lightbulbs in the colors red, yellow, green, and blue repeated consecutively in that order for the entire display. The bulb of the 543rd light needs to be replaced. If the 1st bulb is red, what is the color of the bulb that needs to be replaced?

- ◯ Red
- ◯ Yellow
- ◯ Green
- ◯ Blue

Pattern label 1, 2, 3, ...

Use remainder

R	Y	G	B
1	2	(3)	4
5	6	7	8
9	10	11	12

543rd light

$$\frac{543}{4} = 135$$

R3

$$\begin{array}{r} 135 \\ 4\overline{)543} \\ 4 \\ \hline 14 \\ 12 \\ \hline 23 \\ 20 \\ \hline 3 \end{array}$$

3 is Green

Praxis Review - Form 2

#28

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

The average (arithmetic mean) of 40, 80, and m is 50. The average of 40, 80, m, and v is 60. What is the value of v?

$v =$ ☐

Mean = TOTAL / #

$$\frac{40+80+m}{3} = 50$$

$$40+80+m = 150$$

$$120+m = 150$$

$$m = 30$$

$$\frac{40+80+m+v}{4} = 60$$

$$\frac{40+80+30+v}{4} = 60$$

$$40+80+30+v = 240$$

$$150+v = 240$$

$$v = 90$$

Praxis Review - Form 2

#29

Answer the question below by clicking on the correct response.

A certain brand of paper plates can be purchased only in packages of 15 plates or in packages of 25 plates. Tanya purchased 8 packages of the paper plates, and there was a total of 150 plates in the packages. Of the packages Tanya purchased, how many were packages of 25 plates?

- ○ 2
- ✗ 3
- ○ 4
- ○ 6

Sys of Eqns

x : # 15 plate

y : # 25 plate

$x + y = 8$ $\xrightarrow{\times(-25)}$ $-25x - 25y = -200$

$15x + 25y = 150$ $\longrightarrow$ $15x + 25y = 150$

$-10x = -50$

$x = 5$

if $x = 5$, then $y = 3$

Praxis Review - Form 2

#30

Answer the question below by clicking on the correct response.

Water is leaking from a pipe at a constant rate of $\frac{1}{2}$ cup every 10 minutes. At this rate, how many gallons of water will leak from the pipe in 1 week? (Note: 16 cups = 1 gallon)

- ◯ 15.75 gallons
- ◯ 31.5 gallons
- ◯ 63 gallons
- ◯ 126 gallons

Rate. Propn. Conversion (x1)

$$\frac{\frac{1}{2}\text{ cp}}{10\text{ min}} \cdot \frac{6}{} \cdot \frac{3\text{cp}}{1\text{ hr}} \cdot \frac{24}{} \cdot \frac{72\text{ cp}}{1\text{ day}} \cdot \frac{7}{} = \frac{504\text{ cp}}{1\text{ wk}}$$

16 cups = 1 gal

$$\frac{504}{16} = 31.5\text{ gal}$$