Arkansas Comprehensive Testing, Assessment, and Accountability Program


[^0] of Arkansas Department of Education. Portions of this work were previously published. Printed in the United States of America.

PART II Released Mathematics Items-2008 Augmented Benchmark Grade 8 CALCULATOR NOT PERMITTED-ITEMS 1-3

## 1

The drama club members are sewing costumes for the spring musical. Each costume requires 24 inches of lace.

How many total yards of lace are needed for 18 costumes?
nis A 12 yards
B 18 yards
C 24 yards
D 36 yards


## 3

Juanita bought 2 skirts and a blouse for $\$ 110$. If the cost of each skirt is 3 times the cost of the blouse, for which algebraic equation would the value of $x$ equal the cost of 1 blouse?

A $\quad x+3 x=110$
B $\quad x+x+2 x=110$
C $\quad x+2 x+3 x=110$
呧 D $x+3 x+3 x=110$
4 (The boys in Mrs. Raymond's class

| The collecting aluminum cans for |
| :---: |
| are |
| charity. The data below shows the |
| number of cans each boy collected. |
| Cans Collected for Charity |


| Boy | Number of <br> Cans |
| :---: | :---: |
| Ian | 206 |
| Jesse | 250 |
| John | 145 |
| Mark | 293 |
| Pepper | 190 |
| Silas | 182 |

What is the median number of aluminum cans collected by the 6 boys?

5
Quinton knows that a distance of 30 miles on a map is represented by a line $\frac{1}{4}$ inches long.

If he is estimating the length of a line to represent 315 miles, approximately how long is the line?

A 2 in .
路 B $2 \frac{1}{2} \mathrm{in}$.
C $3 \frac{1}{4} \mathrm{in}$.
D $3 \frac{1}{2} \mathrm{in}$.

PART II Released Mathematics Items-2008 Augmented Benchmark Grade 8

A telephone company offers a service plan that is shown on the graph below.


What is the equation of this line?
[誻 A $y=0.10 x+10$
B $y=10 x+0.10$
C $y=10 x+10$
D $y=0 x+10$


What is the length of Linda's box?

A 9.5 inches
[9 B 12.6 inches
C 14.0 inches
D 15.0 inches

The figure shown below represents an area that will be planted with grass.

15 ft


What is the total area that will be planted with grass?

A 90 square feet
B 135 square feet
nes) C 225 square feet
D 360 square feet

## PART II Released Mathematics Items-2008 Augmented Benchmark Grade 8

Deb and Antoinette used a polyhedral die with 10 sides to play a game. They threw the die 100 times and recorded their results in the table below.

100 Throws of Polyhedral Die

| Number on Die | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of Times Rolled | 14 | 17 | 12 | 7 | 10 | 8 | 12 | 5 | 11 | 4 |

Based on the data, what is the experimental probability that Deb will throw a 7 on her next roll?
n㖸 A 3 out of 25
B 1 out of 20
C 1 out of 10
D 4 out of 5

## PART II Released Mathematics Items-2008 Augmented Benchmark Grade 8

## MATHEMATICS OPEN RESPONSE ITEM 1

## 1

Doug built a flower box for his mother. The width of the flower box is 11 inches, the height is 8 inches, and the length is 34 inches.

1. Doug's mother places dirt in the flower box. She does not fill the flower box to the top with dirt and instead leaves 2 inches at the top. What is the amount of dirt she will use? Show your work and/or explain your answer.
2. Frances also built a flower box. The volume of her flower box is $5,843.75$ cubic inches. The dimensions of Frances's flower box are 25\% greater than the dimensions of Doug's flower box. The width of Frances's flower box is $13 \frac{3}{4}$ inches. What is the height and length of Frances's flower box? Show your work and/or explain your answer.

BE SURE TO LABEL YOUR RESPONSES 1 AND 2.

## RUBRIC FOR MATHEMATICS OPEN RESPONSE ITEM 1

| SCORE | DESCRIPTION |
| :--- | :--- |
| 4 | Correct labels in Parts 1 and 2. Response contains no incorrect work. |
| 3 | The student earns 3 points. |
| 2 | The student earns 2 points. |
| 1 | 1 or some minimal understanding is shown. |
| 0 | Blank-No Response. A score of "B" will be reported as "NA." (No attempt to answer the item. Score of " 0 " assigned for the item.) |

MATHEMATICS OPEN RESPONSE ITEM 2

The figure below shows the distance between three houses.


1. What is the shortest distance, in miles, that Carlos will have to ride his bicycle to visit his friend Miguel? Show all your work and/or explain your answer.
2. If it takes Carlos 30 minutes to ride his bicycle to Miguel's house, at what speed, in miles per hour, is he traveling? Show all your work and/or explain your answer.

BE SURE TO LABEL YOUR RESPONSES 1 AND 2.

RUBRIC FOR MATHEMATICS OPEN RESPONSE ITEM 2

| SCORE | DESCRIPTION |
| :---: | :--- |
| 4 | Response contains no incorrect work. |
| 3 | The student earns 3 points. |
| 2 | The student earns 2 points. |
| 1 | 1 or some minimal understanding is shown. <br> - For minimal understanding in Part 1, shows the correct use of the Pythagorean Theorem with no more than 1 calculation error <br> - For minimal understanding in Part 2, response uses the "distance formula" (d=rt) with correct substitutions |
| 0 | Blank-No Response. A score of " B " will be reported as "NA." (No attempt to answer the item. Score of " 0 " assigned for the item.) |


[^0]:    Copyright © 2008 by Arkansas Department of Education. All rights reserved. Arkansas public schools may reproduce this document in full or in part for use with teachers, students, and parents. All other uses of this document are forbidden without written permission from the Arkansas Department of Education. All inquiries should be sent to Dr. Gayle Potter at the Arkansas Department of Education, 501-682-4558. The ACTAAP logo is a trademark

