A*C*TAAP

Arkansas Comprehensive Testing, Assessment, and Accountability Program

Released Item Booklet

Arkansas Augmented Benchmark Examination

APRIL 2008 ADMINISTRATION

GRADE

7

Arkansas Department of Education

CALCULATOR NOT PERMITTED—ITEMS 1–3

1   100000044761

Which figure is a concave polygon?

☞ **A**

C

B

D
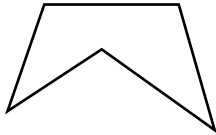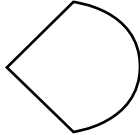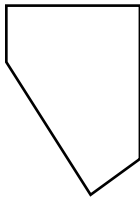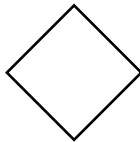
2   100000044736

This season, a baseball team increases ticket prices by 15% over the previous season's prices. How much will a ticket cost this season that had a price of $24 the previous season?

    A $24.36
    B $26.40
☞ **C** $27.60
    D $36.00

3   100000044707

The figure below shows part of a ruler, and the letters X, Y, and Z represent specific measurements. What is the **correct** measurement for letter X's location?

X   Y   Z

3   4   5   6
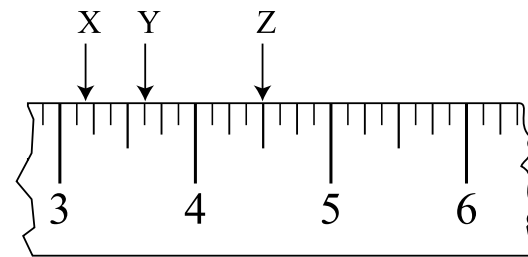
☞ **A** $3\frac{3}{16}$ inches

   B $3\frac{2}{8}$ inches

   C $3\frac{1}{2}$ inches

   D $3\frac{5}{8}$ inches

CALCULATOR PERMITTED—ITEMS 4–10 and 1–2

4

100000044733

What is the rule for finding the output in the table below?

Input (*x*)	Output (*y*)
5	14
6	17
7	20
8	23
9	26
10	29

A add 3 to *x*
B multiply *x* by 2, then add 4
☞ **C** multiply *x* by 3, then subtract 1
D multiply *x* by 4, then subtract 11

5

100000044726

Which function table represents $y = 3x + 2$?

A

x	*y*
−2	−4
0	5
3	11

☞

C

x	*y*
−2	−4
0	2
3	11

B

x	*y*
−2	−8
0	2
3	11

D

x	*y*
−2	0
0	$-\dfrac{2}{3}$
3	$\dfrac{1}{3}$

6   100000044679

Jack's math test scores are listed below.

82 62 91 83 75 83

If Jack scores a 97 on his next math test, which statement would be true?

☞ **A**   The mean and median would increase while the mode would remain the same.
B   The median would increase while the mean and mode would remain the same.
C   The mode would increase while the mean and median would stay the same.
D   The mode, median, and mean would all increase.

7   100000044722

A woodworking class spends $5 for materials to make yo-yos. The class sells the yo-yos for $2 each. The table below represents how much profit is made when x yo-yos are sold.

Number of Yo-Yos Sold (x)	Profit in Dollars ($2x - 5$)
1	$^-3$
2	$^-1$
4	3
8	y
16	27

What is the value of y in the function table?

A   5
B   6
☞ **C**   11
D   21

8

The scatterplot below shows the number of books read by students in Mrs. Hall's English class and their final grades. Which statement represents the **best** conjecture about the line of best fit?

Book Reading and English Grades
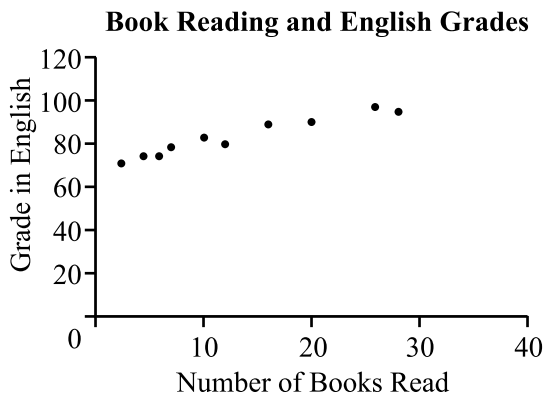
A   The more books students read, the lower their English grade.

☞ **B**   The more books students read, the higher their English grade.

C   The fewer books students read, the higher their English grade.

D   No relationship exists between the number of books students read and their English grades.

9

A rectangle and a square have equal perimeters. The area of the square is 64 square inches and the length of the rectangle is 10 inches.

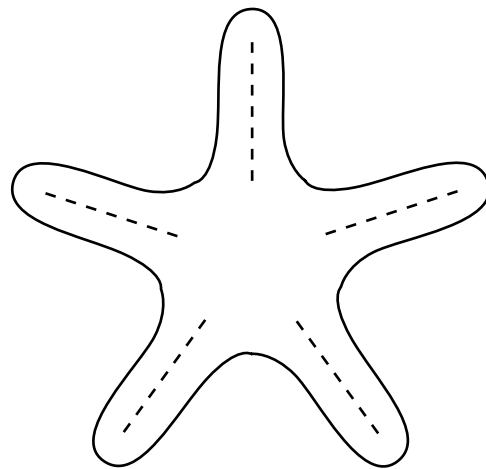What is the width of the rectangle?

A   32 in.
B   12 in.
C   8 in.
☞ **D**   6 in.

10

What is the minimal rotational symmetry of the starfish shown below?

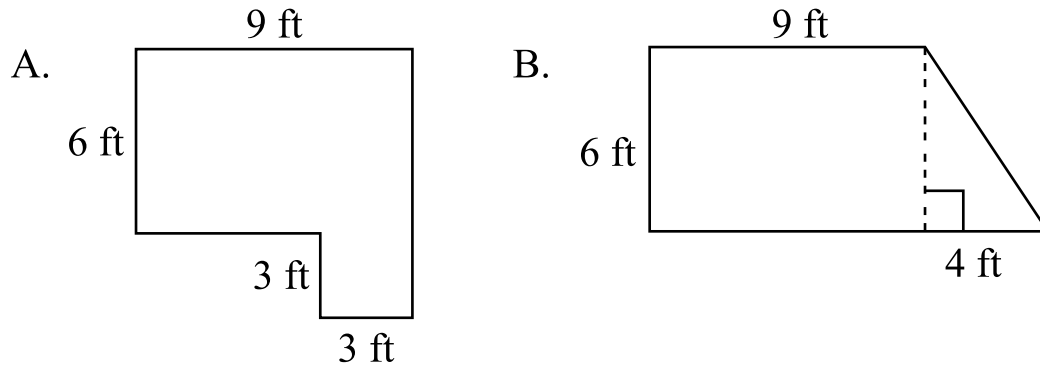

☞ **A**   72°
B   90°
C   144°
D   360°

MATHEMATICS OPEN RESPONSE ITEM 1

1

100000044752

Melanie wants to plant a vegetable garden in two different garden plots, as shown in the figures below.

A.

9 ft

6 ft

3 ft

3 ft

B.

9 ft

6 ft

4 ft

1. Melanie needs 65 sq ft to plant corn in her garden. Which garden plot should Melanie choose to plant corn? Show all your work and/or explain your answer.

2. Melanie plans to fertilize both garden plots 2 times during the season. One bag of fertilizer will fertilize 135 sq ft. How many bags of fertilizer will Melanie need to buy? Show all 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	Response contains no incorrect work.
3	The student earns 3 points.
2	The student earns 2 points.
1	1 or some minimal understanding 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

2

100000044712

The table below shows how many minutes were spent studying for a test and the scores received on the test by 6 students.

Minutes Spent Studying (x)	Score Received on Test (y)
45	99
25	94
22	82
18	75
15	71
10	65

1. What is the mean test score in the table above? Show all your work and/or explain your answer.

2. On the grid in your answer document, draw a scatterplot to display the data in the table above. Use all the correct graphing techniques.

3. Based on the scatterplot, write a sentence describing the relationship between the minutes spent studying and the scores received on the test.

BE SURE TO LABEL YOUR RESPONSES 1, 2, AND 3.

RUBRIC FOR MATHEMATICS OPEN RESPONSE ITEM 2

SCORE	DESCRIPTION
4	Response contains no incorrect work.
3	The student earns 3-3 $\frac{1}{2}$ points.
2	The student earns 2-2 $\frac{1}{2}$ points.
1	$\frac{1}{2}$ -1 $\frac{1}{2}$ or some minimal understanding 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.)