



**NEW ENGLAND
COMMON ASSESSMENT PROGRAM**

Student Practice Test Booklet

Grade 7

Mathematics

Student Name: _____

School Name: _____

Mathematics—Session 1 (Non-Calculator)

Answer questions 1 through 4 on page 2.

1 Kenji drew a figure. His figure

- is a parallelogram, and
- has four right angles.

Which one of the following **must** Kenji's figure be?

- A. a rectangle
- B. a rhombus
- C. a square
- D. a pentagon

2 Rachel started a new business. The table below shows the profit or loss each month for six months. Rachel uses positive numbers to show a profit and negative numbers to show a loss.

Month	Profit or Loss (\$)
January	-1980
February	-280
March	3870
April	-770
May	-910
June	1030

How much profit or loss did Rachel have after being in business for six months?

- A. loss of \$8840
- B. loss of \$960
- C. profit of \$960
- D. profit of \$8840

3 A solid figure has

- 3 rectangular faces, and
- 2 triangular bases.

What is the name of the solid figure?

- A. triangular prism
- B. triangular pyramid
- C. rectangular prism
- D. rectangular pyramid

4 Tony has n nickels and d dimes. Which expression represents the total value, in cents, of Tony's coins?

- A. $n + d$
- B. $5n + 10$
- C. $n + d + 10$
- D. $5n + 10d$

Answer question 5 on page 2.

- 5 Look at this sentence.

$$\square + 5 < 5$$

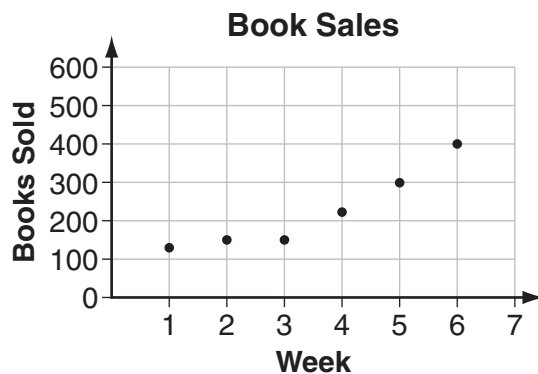
Describe **all** of the numbers that make the sentence true.

Answer question 6 on page 2.

- 6 a. A pyramid has a hexagon for its base. How many edges does the pyramid have?
b. A pyramid has a base that is a polygon with n sides. Use n to write an expression that represents the number of edges the pyramid has.

Answer question 7 on page 2.

- 7 The graph below shows sales at a bookstore each week.



- a. What was the first week when more than 200 books were sold?
b. Predict how many books will likely be sold in Week 7.

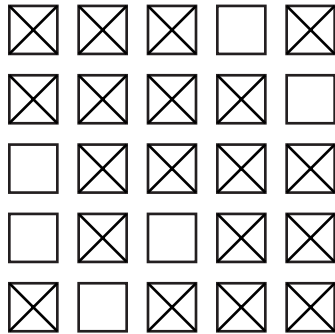


Mathematics—Session 2 (Calculator)

Answer questions 8 through 11 on page 3.

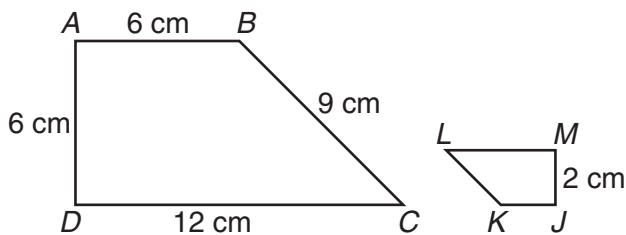
- 8 Ms. Tinsdale marked an “X” on her seating chart for each student buying lunch.

Seating Chart



What percent of the students are buying lunch?

- 9 Look at these quadrilaterals (not drawn to scale).



Quadrilateral $ABCD \sim$ quadrilateral $JKLM$.

What is the length of \overline{LM} ?

- A. 3 cm
B. 4 cm
C. 5 cm
D. 8 cm

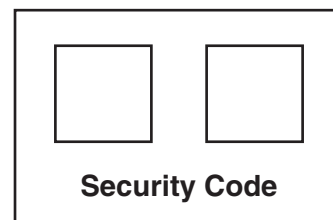
- 10 Look at this table.

Health Club Family Rates

Members in Family	Monthly Cost
1	\$ 58
2	\$ 88
3	\$118
4	\$148

Which expression correctly states how the monthly cost is related to the number of members in a family?

- A. \$30 per person
B. \$58 per person
C. \$28 plus \$30 per person
D. \$58 plus \$30 per person
- 11 A company’s security code is made by assigning one letter of the alphabet to each position shown below. Letters may be repeated.




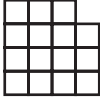


How many different codes can the company make?

- A. 52
B. 100
C. 325
D. 676

Answer question 12 on page 3.

12 Look at this chart.

Term	Model	Number of Boxes
1		3
2		7
3		11
4		15
⋮	⋮	⋮
⋮	⋮	⋮
⋮	⋮	⋮
n	?	?

Use words or symbols to describe how to find the **number** of boxes in Term n .

Answer question 13 on page 3.

13 Copy the tables into your Student Answer Booklet.

a. Complete the tables.

Table 1

x	2^x
1	2
2	
3	8
4	
5	
6	

Table 2

y	4^y
1	4
2	
3	64
4	
5	
6	

b. What value of y makes $2^8 = 4^y$ true?

c. If $2^x = 4^y$, what **must** be true about the values of x and y ?



