



**NEW ENGLAND  
COMMON ASSESSMENT PROGRAM**

**Student Work Samples   
2010**

**Grade 7**



# Mathematics



11

$$\begin{array}{l} 4:00\text{PM} = -6^{\circ}\text{C} \\ 10:00\text{PM} = -11^{\circ}\text{C} \end{array} \quad \begin{array}{r} -6 \\ -5 \\ \hline -11 \end{array}$$



The temperature was  $-11$

11



$$-6 + 5^{\circ} = 11^{\circ}$$

$11^{\circ}$  at 10:00 pm.

11



11

$$\begin{array}{r} 6^{\circ}\text{C} \\ -50^{\circ}\text{C} \\ \hline \end{array} = \textcircled{1^{\circ}\text{C}}$$

12

8

12

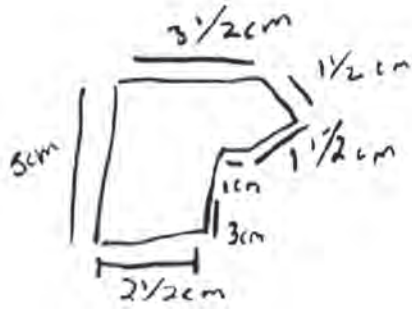
$$6 + v = (2 + e^{12}) = 14 \quad 6 + ? = 14 \quad 14 - 6 = 8$$
$$v = 8$$

12

$$F + v = 2 + c$$

$$6 + 12 = 18 \quad v = 18$$

13



$1\frac{1}{2}$  } 1cm  
 $1\frac{1}{2}$   
1  
3  
 $2\frac{1}{2}$  } 1cm  
5  
 $3\frac{1}{2}$

1  
1  
3  
2  
1  
5  
3  
= 18cm total  
**18 x 4 = 72 Ft**

$$13 \quad 18 \text{ m} \times 4 = 72 \text{ feet}$$

13

72 ft. I got this answer by using my ruler and making marks for 4 ft. and when I came to  $\frac{1}{2}$  a centimeter I counted it as 2 because  $\frac{1}{2}$  of 4 = 2.

13

72 feet

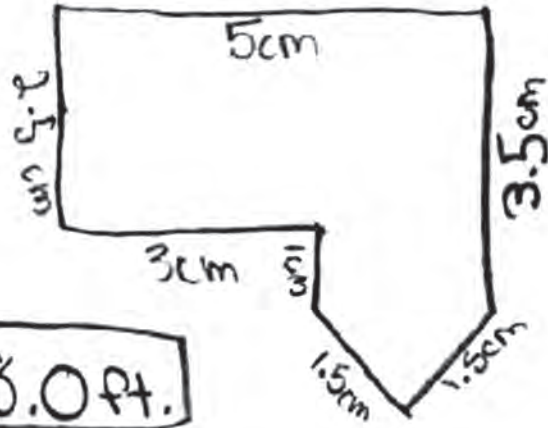
I measured the perimeter and got  
72 feet.

$$\begin{aligned} 13 \quad & 5 \times 4 + 3.5 \times 4 + 3 \times 4 + 1 \times 4 + 1.5 \times 4 + 1.5 \times 4 = \\ & 20 + 14 + 12 + 4 + 6 + 6 = \\ & 51 \text{ ft} \end{aligned}$$

13

$$\begin{array}{r} 2 \\ 9.0 \\ + 9.0 \\ \hline 18.0 \end{array}$$

18.0 ft.



13 295.312 ft is the perimeter of the porch. I got this by measuring each side in centimeters with my ruler and multiplying the length of each side on my calculator.

14

A.  $70^{\circ}\text{F}$  was the mode.

B.  $10^{\circ}\text{F}$ ,  $10^{\circ}\text{F}$ ,  $31^{\circ}\text{F}$ ,  $39^{\circ}\text{F}$

14

$$A = 7^{\circ}F$$

B =

0	11
<del>0</del>	<del>02</del>
3	02

14

a.  $07^{\circ}\text{F}$

b.  $01^{\circ}\text{F}, 01^{\circ}\text{F}, 30^{\circ}\text{F}, 30^{\circ}\text{F}$



14

A The Mode

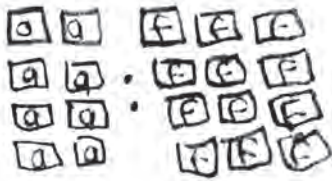
Qs (3) = (7)

B

(6)	(7)	(8)	(4)
6	7	8	4

15

a.) 2:3



8 animal cards : 12 fruit cards

b.) Eight of the 20 are animal cards

c.) Four cards have bananas on them



15

A.  $\boxed{A} \boxed{A} \boxed{A} \boxed{A} \boxed{A} \boxed{A} \boxed{A} \boxed{A} \quad 8 : = 2 :$   
 $\boxed{F} \boxed{F} \boxed{F} \boxed{F} \boxed{F} \boxed{F} \boxed{F} \boxed{F} \boxed{F} \boxed{F} \boxed{F} \boxed{F} \quad 12 : = 3$

B. Out of the 20 cards 8 of them are animal. I know this because

$$\begin{array}{r} 2 \times 4 = 8 \\ 3 \times 4 = 12 \\ \hline 20 \end{array}$$

C.  $\begin{array}{r} 4 \\ 3 \overline{)12} \\ \underline{-12} \\ 0 \end{array}$  If  $\frac{1}{3}$  of the fruit cards have bananas on them, 4 cards have bananas. This is because  
 $4 \times 3 = 12$        $12 \div 3 = 4$  or  $4 \times 3 = 12$

15

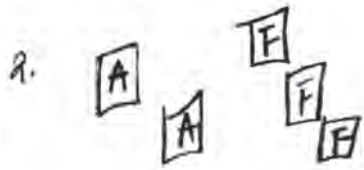
a. If there are 20 cards, and in every 5, 2 are animals and 3 are fruit, then we multiply each ratio by 4  $(A \cdot 4) + (F \cdot 4) = 20$

b.

For  $2 \cdot 4 = 8$  there are 8 animal cards.

c. There are 12 fruit cards.  $\frac{1}{3}$  of 12 is 4. If  $\frac{1}{3}$  of cards are bananas, then there are 4 banana cards.

15



b

$$\begin{array}{r} 4 \\ \times 3 \\ \hline 12 \end{array}$$
$$\begin{array}{r} 4 \\ \times 2 \\ \hline 8 \end{array}$$

12 cards

c.

$$12 \div 3 = 4$$

4 cards

15



(A)

(B)

There are  
8 Animal  
cards

(C)

There are 4 cards  
with bananas on  
them.

15

(A)  $\boxed{A|A} = \boxed{F|F|F}$

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(B) 8 of the cards are animal cards

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(C) 12 fruitcards  $\div \frac{1}{3} = 4$  banana cards

12 of the cards are fruit, but  $\frac{1}{3}$  of the fruit cards are banana so  $12 \div \frac{1}{3} = 4$

15

A.  
2A : 1F

B.  
14

2 of the fruit cards have bananas on them. How I know this is 14 of the cards have animals on them. Therefore 6 have fruit on them. And  $\frac{1}{3}$  of 6 is 2. That's how I found out my answer.

15

Ⓐ AA: FFF or AA | B (8)  
F F F

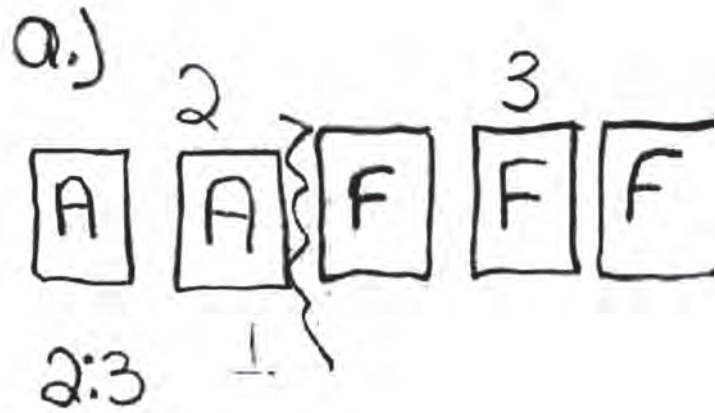
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C.  $\frac{12}{0} - \frac{1}{3} = \frac{11}{3}$

11 cards have Bananas

b.)  $\frac{1}{2}$  animal  
-cards

3 cards are fruit



15

a

20 carbs  
1/3 are animal  
2/3 are fruit

$$20 \times 5 = 100$$
$$33.1 = a$$
$$83 = F$$

b

1/3 are animal  
33.1 animals

$$\begin{array}{r} 033^{R1} \\ 3 \overline{) 100} \\ \underline{9} \phantom{0} \\ 10 \\ \underline{9} \\ 1 \end{array}$$

c

2/3 are fruit  
16.4 fruit

5.14 are bananas

$$\begin{array}{r} 005.14 \\ 3 \overline{) 16.4} \\ \underline{15} \phantom{0} \\ 14 \end{array}$$

3000000  
150