

**NEW YORK STATE  
COMPONENT RETEST**

**MATHEMATICS A  
COMPONENT 6  
MODULE 2**

**TUESDAY, MAY 20, 2008**

**SCORING KEY  
AND  
RATING GUIDE**

**Multiple Choice Key**

(1)	1
(2)	4
(3)	2
(4)	1
(5)	2
(6)	3

**Math A Component Retest**  
**May 2008**  
**Component 6, Module 2**

**Key to Multiple-Choice Questions**

(1)	1
(2)	4
(3)	2
(4)	1
(5)	2
(6)	3

**Rubrics**

(7)

[4] 4 black, 8 red, and 12 green, and appropriate work is shown, such as  $\frac{1}{2} = \frac{x + 8}{4x + 8}$  or trial and error with at least three trials and appropriate checks.

[3] Appropriate work is shown, but one computational error is made.

*or*

[3] Appropriate work is shown, but only the number of one color of jelly bean is found.

*or*

[3] 4, 8, 12, and appropriate work is shown, but the colors are not identified or are identified incorrectly.

[2] Appropriate work is shown, but two or more computational errors are made.

*or*

[2] Appropriate work is shown, but one conceptual error is made, but the appropriate number of each color of jelly bean is found.

*or*

[2] The trial-and-error method is used to find the correct answers, but only two trials and appropriate checks are shown.

*or*

[2] The trial-and-error method is attempted and at least six systematic trials and appropriate checks are shown, but no solution is found.

*or*

[2] A correct equation is written, but no further correct work is shown.

*or*

[2] An incorrect equation of equal difficulty is solved appropriately for the number of each color of jelly bean.

[1] Appropriate work is shown, but one conceptual error and one computational error are made.

*or*

[1] The jelly beans are appropriately defined in terms of a single variable, such as black =  $x$ , red =  $2x$ , and green =  $x + 8$ , but no further correct work is shown.

*or*

[1] 4 black, 8 red, and 12 green, but no work or only one trial with an appropriate check is shown.

[0] 4, 8, and 12, but the colors are not identified or are identified incorrectly, and no work or only one trial with an appropriate check is shown.

*or*

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously incorrect procedure.

(8)

[4]  $\frac{100}{9000}$  or an equivalent answer, and appropriate work is shown, such as  $\frac{1 \cdot 10^2 \cdot 1}{9 \cdot 10^3}$ .

[3] Appropriate work is shown, but one computational error is made.

*or*

[3] Appropriate work is shown to find 100 and 9000, but no probability is found.

[2] Appropriate work is shown, but two or more computational errors are made.

*or*

[2] Appropriate work is shown, but one conceptual error is made, such as not allowing for repetition of digits.

[1] Appropriate work is shown, but one conceptual error and one computational error are made.

*or*

[1] Either 100 or 9000 is found, and appropriate work is shown, but no further correct work is shown.

*or*

[1] 100 and 9000 or an equivalent answer, but no work is shown.

*or*

[1]  $\frac{100}{9000}$ , but no work is shown.

[0] 100 or 9000, but no work is shown.

*or*

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously incorrect procedure.

(9)

[4]  $\frac{648}{1980}$  or an equivalent answer, and appropriate work is shown, such as

$$\frac{{}_{18}C_2 + {}_{15}C_2 + {}_{12}C_2}{{}_{45}C_2} \text{ or } \frac{18}{45} \cdot \frac{17}{44} + \frac{15}{45} \cdot \frac{14}{44} + \frac{12}{45} \cdot \frac{11}{44}.$$

[3] Appropriate work is shown, but one computational or rounding error is made.

*or*

[3]  $P(R,R) = \frac{306}{1980}$ ,  $P(G,G) = \frac{210}{1980}$ , and  $P(Y,Y) = \frac{132}{1980}$  are calculated correctly, but they are not added.

[2] Appropriate work is shown, but two or more computational or rounding errors are made.

*or*

[2] Appropriate work is shown, but one conceptual error is made, such as calculating the probabilities with replacement or multiplying the three probabilities.

*or*

[2] Two of the three probabilities are calculated correctly, but no further correct work is shown.

*or*

[2]  $\frac{{}_{18}C_2 + {}_{15}C_2 + {}_{12}C_2}{{}_{45}C_2}$  or  $\frac{18}{45} \cdot \frac{17}{44} + \frac{15}{45} \cdot \frac{14}{44} + \frac{12}{45} \cdot \frac{11}{44}$  is written, but it is not evaluated.

[1] Appropriate work is shown, but one conceptual error and one computational or rounding error are made.

*or*

[1] Only one of the three probabilities is calculated correctly, but no further correct work is shown.

*or*

[1]  $\frac{648}{1980}$  or an equivalent answer, but no work is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously incorrect procedure.