MCAS Grade 6 Mathematics
Computer-Based Practice Test Answer Key

Session 1

CBT Item No.	Standard	Item Type*	Max Points	Correct Answer**
1	6.RP.A.2	SR	1	B
2	6.NS.C.8	SR	1	*See page 2*
3	6.EE.B.6	SA	1	6w *(or equivalent expression)*
4	6.SP.A.1	SR	1	D, E
5	6.RP.A.1	SR	1	*See page 2*
6	6.EE.A.2	CR	4	*See page 4*
7	6.RP.A.3	SR	1	D
8	6.RP.A.3	SA	1	35
9	6.EE.A.1	SR	1	D
10	6.SP.B.4	SR	1	*See page 2*
11	6.G.A.4	SR	1	C
12	6.EE.B.5	SR	1	C
13	6.NS.B.4	SR	1	D
14	6.SP.B.5	CR	4	*See page 5*
15	6.EE.B.7	SR	1	D
16	6.G.A.3	SR	1	*See page 2*
17	6.RP.A.3	SR	2	B;A
18	6.SP.A.3	SR	1	C
19	6.EE.B.8	SR	1	C
20	6.NS.C.5	SR	1	D

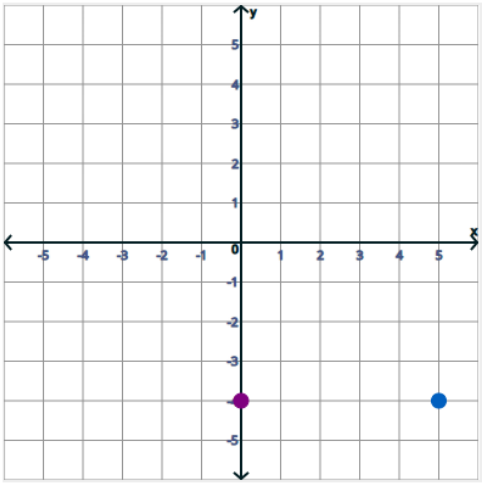
Session 2

CBT Item No.	Standard	Item Type*	Max Points	Correct Answer**
21	6.EE.B.5	SR	1	D
22	6.SP.A.2	SR	1	*See page 3*
23	6.EE.A.2	SA	1	3
24	6.NS.C.7	SR	1	*See page 3*
25	6.RP.A.3	SR	1	C,D
26	6.EE.B.8	SR	1	*See page 3*
27	6.G.A.1	CR	4	*See page 6*
28	6.NS.B.3	SR	1	B
29	6.EE.A.4	SR	1	B
30	6.RP.A.1	SR	1	C
31	6.EE.A.3	SR	1	B,D
32	6.NS.C.6	SR	1	C
33	6.RP.A.2	SR	1	A
34	6.EE.C.9	SR	1	B
35	6.NS.B.2	CR	4	*See page 7*
36	6.SP.B.4	SR	1	*See page 3*
37	6.RP.A.3	SR	1	B
38	6.G.A.2	SA	2	6; $\frac{1}{8}$ *(or equivalent fraction or decimal)*
39	6.EE.B.6	SR	1	D
40	6.RP.A.3	SR	1	D

*Mathematics item types are selected-response (SR), short-answer (SA), and constructed-response (CR).

**Answers are provided here for selected-response and short-answer items only. Pages 2 and 3 of this document provide correct answers for technology-enhanced (TE) items. Pages 4–7 provide sample responses and scoring guidelines for constructed-response items.

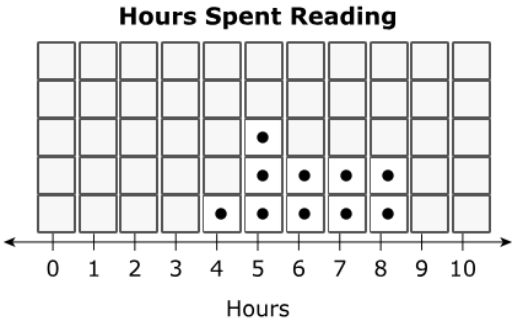
Correct Answer for CBT Item #2: Technology-Enhanced Item



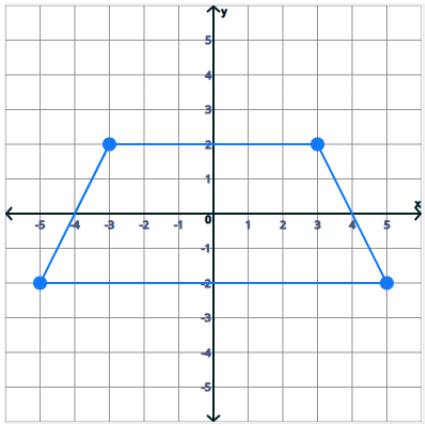
Correct Answer for CBT Item #5: Technology-Enhanced Item

Relationship	7:8	$\frac{7}{2}$	21 to 51
flamingos to penguins	◉	○	○
flamingos to all birds at the zoo	○	○	◉
flamingos to storks	○	◉	○

Correct Answer for CBT Item #10: Technology-Enhanced Item



Correct Answer for CBT Item #16: Technology-Enhanced Item



Correct Answer for CBT Item #22: Technology-Enhanced Item

The median of the data is equal to 7.

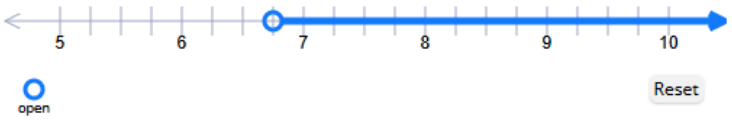
The range of the data is equal to 8.

Correct Answer for CBT Item #24: Technology-Enhanced Item

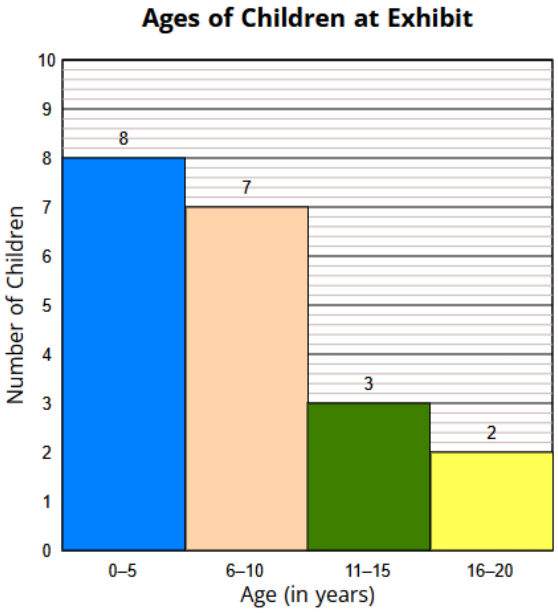
The number -24 is less than the number -18.

The expression $|-24|$ is greater than the expression $|-18|$.

Correct Answer for CBT Item #26: Technology-Enhanced Item



Correct Answer for CBT Item #36: Technology-Enhanced Item



Scoring Guide for CBT Item #6: Constructed-Response Item

Score	Description
4	The student response demonstrates an exemplary understanding of the Expressions and Equations concepts involved in writing, reading, and evaluating expressions in which letters stand for numbers. The student correctly writes expressions and evaluates them at specific values of their variables.
3	The student response demonstrates a good understanding of the Expressions and Equations concepts involved in writing, reading, and evaluating expressions in which letters stand for numbers. Although there is significant evidence that the student was able to recognize and apply the concepts involved, some aspect of the response is flawed. As a result, the response merits 3 points.
2	The student response demonstrates a fair understanding of the Expressions and Equations concepts involved in writing, reading, and evaluating expressions in which letters stand for numbers. While some aspects of the task are completed correctly, others are not. The mixed evidence provided by the student merits 2 points.
1	The student response demonstrates a minimal understanding of the Expressions and Equations concepts involved in writing, reading, and evaluating expressions in which letters stand for numbers.
0	The student response contains insufficient evidence of an understanding of the Expressions and Equations concepts involved in writing, reading, and evaluating expressions in which letters stand for numbers. As a result, the response does not merit any points.

Sample Response:

The following are the most common correct answers. Other versions of the correct answers also receive credit.

Part A

$m + 4$

Part B

9; $m + 4 = 5 + 4 = 9$

Part C

$(2 \times 9) - y$ or equivalent

Part D

12; $(2 \times 9) - y = 18 - 6 = 12$

Scoring Guide for CBT Item #14: Constructed-Response Item

Score	Description
4	The student response demonstrates an exemplary understanding of the Statistics & Probability concepts involved in summarizing a numerical data set displayed in a dot plot, in relation to the context. The student correctly interprets data displayed in a dot plot, finds the median and a percentage, and uses them to solve problems.
3	The student response demonstrates a good understanding of the Statistics & Probability concepts involved in summarizing a numerical data set displayed in a dot plot, in relation to the context. Although there is significant evidence that the student was able to recognize and apply the concepts involved, some aspect of the response is flawed. As a result, the response merits 3 points.
2	The student response demonstrates a fair understanding of the Statistics & Probability concepts involved in summarizing a numerical data set displayed in a dot plot, in relation to the context. While some aspects of the task are completed correctly, others are not. The mixed evidence provided by the student merits 2 points.
1	The student response demonstrates a minimal understanding of the Statistics & Probability concepts involved in summarizing a numerical data set displayed in a dot plot, in relation to the context.
0	The student response contains insufficient evidence of an understanding of the Statistics & Probability concepts involved in summarizing a numerical data set displayed in a dot plot, in relation to the context. As a result, the response does not merit any points.

Sample Response:

The following are the most common correct answers. Other versions of the correct answers also receive credit.

Part A

There are 3 customers who spent $17, according to the dot plot.

Part B

There are 7 customers who spent less than the median amount of money. The median is 18 dollars and exactly 7 values in the data set are less than 18.

Part C

There are 10 customers who spent between 14 and 22 dollars. Sorted low to high the data are 10, 11, 14, 14, 17, 17, 17, 18, 18, 20, 20, 21, 21, 21, and 22. I counted the number of data that lie between 14 and 22 and found 10.

Part D

60%. There is a total of 9 customers who spent less than 20 dollars, and there is a total of 15 customers. $\frac{9}{15} = 0.60$ or 60%.

Scoring Guide for CBT Item #27: Constructed-Response Item

Score	Description
4	The student response demonstrates an exemplary understanding of the Geometry concepts involved in finding the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes, and applying these techniques in the context of solving real-world and mathematical problems. The student correctly decomposes a figure and finds its area.
3	The student response demonstrates a good understanding of the Geometry concepts involved in finding the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes, and applying these techniques in the context of solving real-world and mathematical problems. Although there is significant evidence that the student was able to recognize and apply the concepts involved, some aspect of the response is flawed. As a result, the response merits 3 points.
2	The student response demonstrates a fair understanding of the Geometry concepts involved in finding the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes, and applying these techniques in the context of solving real-world and mathematical problems. While some aspects of the task are completed correctly, others are not. The mixed evidence provided by the student merits 2 points.
1	The student response demonstrates a minimal understanding of the Geometry concepts involved in finding the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes, and applying these techniques in the context of solving real-world and mathematical problems.
0	The student response contains insufficient evidence of an understanding of the Geometry concepts involved in finding the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes, and applying these techniques in the context of solving real-world and mathematical problems. As a result, the response does not merit any points.

Sample Response:

The following are the most common correct answers. Other versions of the correct answers also receive credit.

Part A

12 OR 12 inches

Part B

6 square inches. Since triangle JKN is a right triangle with a height of 4 and a base of 3, I find the area using $3 \times 4 \div 2$ and get the answer of 6 square inches.

Part C

42 square inches. I decomposed trapezoid KLMN into a rectangle and a triangle that is congruent to triangle JKN. The are of the rectangle is $9 \times 4 = 36$. The area of the triangle is the same as in part B which is 6. So, $36 + 6 = 42$.

Part D

48 square inches. I found the total area by adding the area of the triangle to JKN to the area of the trapezoid KLMN. $6 + 42 = 48$.

Scoring Guide for CBT Item #35: Constructed-Response Item

Score	Description
4	The student response demonstrates an exemplary understanding of the Number System concepts involved in fluently dividing multi-digit numbers. The student correctly solves a real-world problem by dividing multi-digit numbers.
3	The student response demonstrates a good understanding of the Number System concepts involved in fluently dividing multi-digit numbers. Although there is significant evidence that the student was able to recognize and apply the concepts involved, some aspect of the response is flawed. As a result, the response merits 3 points.
2	The student response demonstrates a fair understanding of the Number System concepts involved in fluently dividing multi-digit numbers. While some aspects of the task are completed correctly, others are not. The mixed evidence provided by the student merits 2 points.
1	The student response demonstrates a minimal understanding of the Number System concepts involved in fluently dividing multi-digit numbers.
0	The student response contains insufficient evidence of an understanding of the Number System concepts involved in fluently dividing multi-digit numbers. As a result, the response does not merit any points.

Sample Response:

The following are the most common correct answers. Other versions of the correct answers also receive credit.

Part A

64 cans because $256 \div 4 = 64$ OR other mathematically equivalent expression

Part B

16 rows with 16 cans; $256 \div 16 = 16$. OR any other combination of rows and columns whose product is 256

Part C

8 shelves; $1632 \div 12 = 136$, $136 \div 17 = 8$ OR other mathematically equivalent expression

Part D

4 days. There are 136 cartons of eggs, so $136 \div 34 = 4$ OR other mathematically equivalent expression