Montana Comprehensive Assessment System *(MontCAS, Phase 2)*

Criterion-Referenced Test (CRT)

COMMON CONSTRUCTED-RESPONSE ITEM RELEASE
MATHEMATICS, GRADE 4

2008

OPI

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Mathematics

Session 1 (No Calculator)

You may NOT use a calculator during this part of the test.

Write your answer in the space provided for it in your Student Response Booklet. Show all of your work.

25. Haley made a secret-number guessing game. She picked a number **less** than 23 and wrote three clues about her number.

    Clue 1: My number is even.

    a. List all the numbers that Haley's secret number could be.

    Clue 2: I say my number when I start at 4 and skip-count by 4s.

    b. List all the numbers that Haley's secret number could be.

    Clue 3: My number is a multiple of 3.

    c. What is Haley's secret number?

    d. Make another secret-number guessing game.

    - Write three clues Haley could use to find your number.
    - The game must have **only one** correct answer.
    - Be sure to write the answer.

Scoring Guide

Score	Description
4	4 points
3	$3 - 3\frac{1}{2}$ points
2	$2 - 2\frac{1}{2}$ points
1	$\frac{1}{2} - 1\frac{1}{2}$ points
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	No response.

Scoring Notes

Part a:	1 point	writes correct numbers: **2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22,** or **0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22**
	OR	
	$\frac{1}{2}$ point	correctly lists at least 5 numbers
	OR	
		correctly lists even numbers and 1 or more even number above 22
Part b:	1 point	writes correct numbers: **4, 8, 12, 16, 20**
	OR	
	$\frac{1}{2}$ point	correctly lists at least 3 numbers
	OR	
	$\frac{1}{2}$ point	for correct answers that exceed 23
Part c:	1 point	writes correct number, **12**

Part d:	1 point	for 3 correct clues and answer
	OR	
	$\frac{1}{2}$ point	for 3 correct clues with no answer

Note: Do not penalize students for more than 3 correct clues.

Sample Response:

Part d: Clue 1: My number is less than 20.
Clue 2: I say my number when I skip-count by 5s.
Clue 3: My number is a multiple of 3.
My number is 15.

Score Point 4

Sample 1

a. 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22.

b. 4, 8, 12, 16, 20,

c. 6, 12, 18,

12

Clue1: my number is under 10.
Clue 2: my number is an even number
Clue 3: my number is a multipule of 3.

answer
6

Score Point 4

Sample 2

A. 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, and 22 are numbers her secret number could be.

B. 4, 8, 12, 16, and 20 are possible.

C. Haley's number is 12.

D. Clue 1: It is less than 20.
Clue 2: I say my number when I count by 2's.
Clue 3: It is a multiple of 9.

The answer is 18.

Score Point 3

Sample 1

Clue1: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22.

Clue 2: 4, 8, 12, 16, 20

Clue 3: 3, 6, 9, 12, 15, 18, 21

12 is the secret number.

Letitia made a secret number less then 8 look at the clues to figur it out

It's an even number

It's a multipul of 3

And it is a multipul of 2

Score Point 3

Sample 2

A. 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22,

B. 4, 8, 12, 16, 20,

C. Haley's secret number is 12.

D.

The answer to D. is $\boxed{9}$

Clue 1. My number is odd.

Clue 2. You can find it when counting by 3's.

Clue 3. It is a multipile of 3.

Score Point 2

Sample 1

A. 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24

B. 4, 12, 20,

C. 12

Clue 1: my # is not a odd #

Clue 2: it is not a multiple of 3

Clue 3: I say it were I count by 2

Score Point 2

Sample 2

a. 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22

b. 8, 12, 16, 20

c. Haley's secret number is 12.

Clue 1: My number is odd.

a. List all the numbers that my secret number could be.

Clue 2: I say my number when I start at 5 and skip-count by 5s.

b. List all the numbers that my secret number could be.

Clue 3: My number is a Multiple of 3. c. What is my secret number?

My secret number is 15.

Score Point 1

Sample 1

(A) 7, 11, 12, 16, 13.

(b) 4, 8, 12, 16, 20, 23, 27

(C) 8

(d.) you count by 2's to get too my number twice

what is my number

my number is 6

Score Point 1

Sample 2

Clue1 - 22

a. 22, 20, 18, 16, 14, 12, 10, 8, 6, 4, 2

b. 4, 8, 12, 16, 20, 24, 28, 32, 36, 40,

c. I think Haley's secret number is.....8

d.

- my number is odd
- It is one of these numbers

3, 5, 7, 9, or 11

- my number is not a multiple of 10. Can you guess what my number is?

answer = 11

Score Point 1

Sample 3

12, its
a multiple
of 3, skip
count by 4
and is even.

Score Point 0

A. 22, 24, 28

b 4, 8, 24, 28

c

d