

Not for student use.
Use in conjunction with a paper
mathematics item sampler.

Minnesota Comprehensive Assessments-Series III

Mathematics Item Sampler Script
Grade 7



ITEM SAMPLERS ARE NOT SECURE TEST MATERIALS. THIS ITEM
SAMPLER SCRIPT MAY BE COPIED OR DUPLICATED.

**MINNESOTA COMPREHENSIVE ASSESSMENTS
ITEM SAMPLER
GRADE 7 MATHEMATICS SCRIPT**

INSTRUCTIONS CONTAINED IN THE ITEM SAMPLER REFLECT THE CONTENT OF THE ACTUAL TEST AND MAY NOT APPLY TO THE ADMINISTRATION OF THE ITEM SAMPLER.

This script is for the Test Monitor only; it is not for students. This script is the **only** source a Test Monitor may use to read the Mathematics MCA test to students. **This script must be used in conjunction with the grade 7 Mathematics MCA regular print, large print, or Braille test book.** For Braille, Test Monitors should also refer to the *Test Administrator Notes* included with the Braille test book.

GENERAL INSTRUCTIONS FOR TEST MONITORS:

- Prior to test administration, review the *Test Monitor and Student Directions for Paper Accommodations for MCA* for detailed policy and procedure information for test administration (e.g., stopping testing for the day).
- Before students start the test, read the applicable from the *Test Monitor and Student Directions for Paper Accommodations for MCA* to students to instruct them about testing procedures.
- Read aloud to students **ONLY** what is in BOLD TYPE.

Say the following before you begin reading the questions on the next page:

After I read each question, I will pause for as much time as you need to answer the question. Then I will read the next question. You may ask me to repeat any question as many times as you need.

READ ONLY WHAT IS IN BOLD TYPE

GRADE 7 MATHEMATICS MCA SCRIPT
SEGMENT 1

We will now begin Segment One (1). You **MAY NOT** use a calculator for this segment.

Question number one (1):

Please write your answer in the space below the question. You may use the digits: 0-9 and the symbols: slash for a fraction bar (/), a decimal (.) and a negative sign (-).

Simplify (the expression shown).

Question number two (2):

Which shows a model of (the expression shown)?

Choose answer A, B, C, or D.

Question number three (3):

Which describes the absolute value of k ($|k|$) on a number line?

Choose one of the following answers. (Read answers aloud.)

- A. The opposite of k
- B. The same value as k
- C. A value between k and negative k ($-k$)
- D. A distance k units from zero (0)

Question number four (4):

Which represents a proportional relationship?

Choose answer A, B, C, or D.

Question number five (5):

Which represents a proportional relationship?

Choose answer A, B, C, or D.

Question number six (6):

Triangle EFG ($\triangle EFG$) is similar to triangle JKL ($\triangle JKL$) and triangle JKL ($\triangle JKL$) is similar to triangle QRS ($\triangle QRS$). Which statement must be true?

Choose one of the following answers. (Read answers aloud.)

- A. Triangle EFG ($\triangle EFG$) is congruent to triangle QRS ($\triangle QRS$).
- B. Triangle EFG ($\triangle EFG$) is similar to triangle QRS ($\triangle QRS$).
- C. Triangle EFG ($\triangle EFG$) is a reflection of triangle QRS ($\triangle QRS$).
- D. There is no relationship between triangle EFG ($\triangle EFG$) and triangle QRS ($\triangle QRS$).

Question number seven (7):

A veterinarian recorded the weights of animals in a histogram.

The title of the histogram is: “Animal Weights.” The horizontal axis is titled: “Weight (pounds).” The vertical axis is titled: “Number of Animals.”

Which question can be answered using the information from the histogram?

Choose one of the following answers. (Read answers aloud.)

- A. How many animals weigh four point nine (4.9) pounds?**
- B. How many animals weigh between five (5) and ten (10) pounds?**
- C. How many animals weigh less than eight (8) pounds?**
- D. How many animals weigh at least fifteen (15) pounds?**

STOP

This is the end of Segment One (1) of your mathematics test.

If you want to check your answers, you may do so now. You may ask me to repeat any question. You will not be able to come back to these questions later.

Pause while the student checks his or her answers.

After you have checked your answers, seal this segment of your test book.

GRADE 7 MATHEMATICS MCA SCRIPT
SEGMENT 2

We will now begin Segment Two (2). You MAY use a calculator for this segment.

Question number eight (8):

Four points are graphed on a line.

From left to right, along the top, the line is labeled: “*J*,” “*K*,” “*L*,” “*M*.”

Which point is located at the opposite of negative two (-2)?

Choose one of the following answers. (Read answers aloud.)

- A. Point *J*
 - B. Point *K*
 - C. Point *L*
 - D. Point *M*
-

Question number nine (9):

Which statement is true?

Choose answer A, B, C, or D.

Question number ten (10):

Jeremy can plant ten (10) trees in four (4) hours. How many trees can he plant in ten (10) hours?

Choose answer A, B, C, or D.

Question number eleven (11):

On Mondays, Jayda runs between two (2) and five (5) miles. On Tuesdays, she runs three (3) times as far as she runs on the previous Monday. Which inequality can be used to find x , the distance Jayda could run on a Tuesday?

Choose answer A, B, C, or D.

Question number twelve (12):

Please write your answer in the space below the question. You may use the digits: 0-9 and the symbols: slash for a fraction bar ($/$), a decimal ($.$) and a negative sign ($-$).

What is the value of (the expression shown) when t equals negative three ($t = -3$) and r equals five ($r = 5$)?

Question number thirteen (13):

The equation (shown) can be used to estimate y , the height of a tree in centimeters x months after it is planted. When a tree is one hundred fifty centimeters (150 cm) tall, how long ago was the tree planted?

Choose one of the following answers. (Read answers aloud.)

- A. Seven point five (7.5) months**
- B. Ten point eight (10.8) months**
- C. Seventeen point five (17.5) months**
- D. Seventy-eight point zero (78.0) months**

Question number fourteen (14):

A sector of a circle is shown.

**From left to right, the figure is labeled: “five centimeters (5 cm),”
“six point two eight centimeters (6.28 cm).”**

What is the area of the sector? (Use three point one four (3.14) for pi (π)).

Choose one of the following answers. (Read answers aloud.)

- A. Twelve point five square centimeters (12.5 cm²)**
 - B. Fifteen point seven square centimeters (15.7 cm²)**
 - C. Thirty-one point four square centimeters (31.4 cm²)**
 - D. Seventy-eight point five square centimeters (78.5 cm²)**
-

Question number fifteen (15):

**A map uses the scale (shown). Two cities are one hundred ninety (190) miles apart.
How far apart are the cities on the map?**

Choose one of the following answers. (Read answers aloud.)

- A. Zero point two one centimeter (0.21 cm)**
- B. Eleven point four centimeters (11.4 cm)**
- C. Two thousand nine hundred seventeen centimeters (2,917 cm)**
- D. Six thousand five hundred sixty-three centimeters (6,563 cm)**

Question number sixteen (16):

A spinner is divided into eight (8) equal sections. Lara spins the spinner One hundred twenty (120) times. It lands on purple thirty (30) times.

From the top and continuing around clockwise, the graph is labeled: “Purple,” “Green,” “Purple,” “Green,” “Purple,” “Green,” “Yellow,” “Green.”

How many more times does Lara need to spin the spinner and have it land on purple for the relative frequency to equal the theoretical probability?

Choose answer A, B, C, or D.

Question number seventeen (17):

An equation is shown.

Which describes n ?

Choose one of the following answers. (Read answers aloud.)

- A. Integer**
 - B. Irrational**
 - C. Rational**
 - D. Whole**
-

Question number eighteen (18):

Which is equivalent to five and two-fifteenths ($5\frac{2}{15}$)?

Choose answer A, B, C, or D.

Question number nineteen (19):

Nora is running a race that is twenty-six point two (26.2) miles. She is running at a speed of eight (8) miles per hour. She has completed three-fourths ($\frac{3}{4}$) of the race.

How much longer will it take Nora to finish the race?

Choose one of the following answers. (Read answers aloud.)

- A. Zero point eight two (0.82) hour**
 - B. Two point four six (2.46) hours**
 - C. Three point two eight (3.28) hours**
 - D. Six point five five (6.55) hours**
-

Question number twenty (20):

The table shows the cost of different numbers of boxes of cookies.

The title of the table is: “Selling Cookies.” The table has three (3) rows and two (2) columns. The column headings are labeled from left to right: “Boxes of Cookies,” “Cost (dollars).”

What is the cost to buy fifteen (15) boxes of cookies?

Choose one of the following answers. (Read answers aloud.)

- A. Thirty-three dollars and seventy-five cents (\$33.75)**
 - B. Thirty-six dollars and zero cents (\$36.00)**
 - C. Forty dollars and fifty cents (\$40.50)**
 - D. Fifty-one dollars and seventy-five cents (\$51.75)**
-

Question number twenty-one (21):

Simplify (the expression shown).

Choose answer A, B, C, or D.

Question number twenty-two (22):

The equation (shown) gives the relationship between c , the weight of clay, and s , the weight of sand in a mixture. There are six point two five (6.25) pounds of clay in the mixture. What is the weight of the sand?

Choose one of the following answers. (Read answers aloud.)

- A. Four point six nine (4.69) pounds**
 - B. Eight point eight eight (8.88) pounds**
 - C. Eighteen point seven five (18.75) pounds**
 - D. Seventy-five point zero zero (75.00) pounds**
-

Question number twenty-three (23):

A cylinder has a height of x inches. The diameter of the base is also x inches. Which gives the volume of the cylinder?

Choose one of the following answers. (Read answers aloud.)

- A. Two pi x to the second power ($2\pi x^2$)**
- B. One-fourth pi x to the third power ($\frac{1}{4}\pi x^3$)**
- C. One-half pi x to the third power ($\frac{1}{2}\pi x^3$)**
- D. Pi x to the third power (πx^3)**

Question number twenty-four (24):

The translation (shown) was used to move triangle $J K L$ (ΔJKL) to triangle J prime K prime L prime ($\Delta J'K'L'$). Triangle J prime K prime L prime ($\Delta J'K'L'$) is shown on the grid.

Clockwise from the top, the figure on the grid is labeled: “ K prime (K'),” “ L prime (L'),” “ J prime (J').”

What are the coordinates of point K ?

Choose answer A, B, C, or D.

Question number twenty-five (25):

The number of students of each age on a bus is shown in the table.

The title of the table is: “Ages of Students.” The table has five (5) rows and two (2) columns. The column headings are labeled from left to right: “Age (years),” “Number of Students.”

What is the median age of the students?

Choose one of the following answers. (Read answers aloud.)

- A. Ten (10) years
- B. Fourteen (14) years
- C. Fifteen (15) years
- D. Sixteen (16) years

Question number twenty-six (26):

Leon uses squares to make a board. He randomly throws a stone onto the board.

What is the probability the stone lands on a space marked three (3)?

Choose answer A, B, C, or D.

STOP

This is the end of the mathematics test.

If you want to check your answers, you may do so now. You may ask me to repeat any question. You will not be able to come back to these questions later.

Pause while the student checks his or her answers.

After you have checked your answers, seal this segment of your test book.

Collect the test materials from the student as specified in the *Test Monitor and Student Directions for Paper Accommodations for MCA*.

