

MR

Direct Mathematics Assessment

657

STUDENTS DO NOT WRITE IN THIS AREA

ROUND 1

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Your teacher will read the entire test to you before you begin. It is important to solve the problems on this assessment. No calculators are allowed on this assessment.

1. A class of twenty-four students is going on a fishing trip on Saturday. The table shows the cost of the items needed for the trip.

Table with 2 columns: Item, Cost. Rows include Worms, Mealworms, Scented marshmallows, Hot dogs, Boat gas.

Limited mathematical vocabulary, symbols, and communication.

a. The class is going to need three dozen worms, two cartons of mealworms, and two jars of scented marshmallows. What is the total cost of these items? Show and label your work.

Handwritten calculations for part a showing multiplication and addition of costs for worms, mealworms, and marshmallows.

b. Each student will eat two hot dogs for lunch. There are ten hot dogs per package. How many packages will the class need to buy? What is the total cost of the hot dogs? Show and label your work.

Handwritten calculations for part b including '24 Students x 2 Hot dogs each = 48 Hot dogs' and '5 Packages'.

c. The class will need to buy twenty gallons of gas for the boat engine. How much money will they spend on gas? Show and label your work.

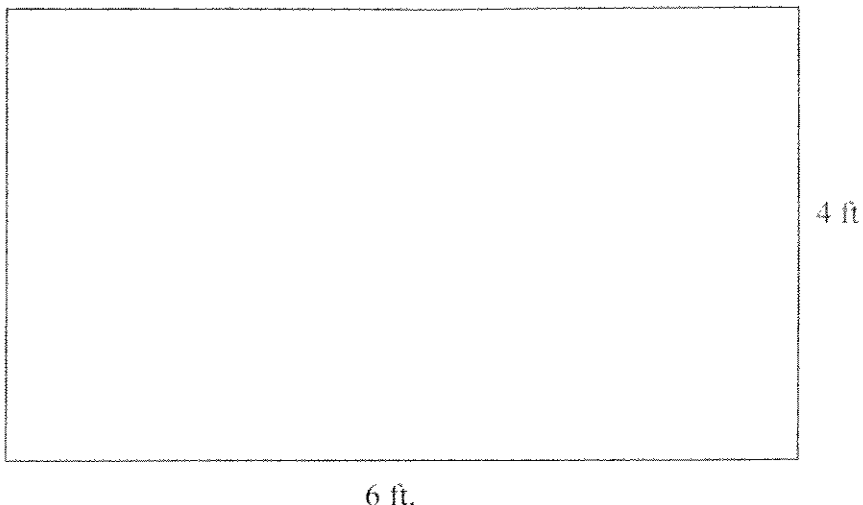
Handwritten calculation for part c: 20 gallons x \$2.50 = \$50.00.

d. On Monday 1/6 of the students returned permission slips. On Tuesday another 1/6 of the students returned permission slips. What fraction of the students still needs to return a permission slip? Show and label your work.

Limited problem-solving strategies.

Handwritten calculation for part d: 6/6 - 1/6 - 1/6 = 4/6.

2. Molly and her mother made a quilt. The quilt was 6 feet long and 4 feet wide.



a. How many inches of ribbon were needed to go around the outside edge of the quilt? *Show and label your work.*

Demonstrates basic use of thinking skills.

$$\begin{array}{r}
 12 \\
 \times 6 \text{ ft} \\
 \hline
 72 \text{ in} \\
 + 48 \text{ in} \\
 \hline
 120 \text{ in of Ribbon}
 \end{array}
 \qquad
 \begin{array}{r}
 12 \\
 \times 4 \text{ ft} \\
 \hline
 48 \text{ in}
 \end{array}$$

b. How many 12x12 inch squares did Molly need to complete her quilt? *Show and label your work*

$$\begin{array}{r}
 72 \text{ in} \\
 + 48 \text{ in} \\
 \hline
 120 \text{ inch squares}
 \end{array}$$

c. If  $\frac{2}{3}$  of the squares are green and  $\frac{1}{3}$  are yellow, how many yellow squares would Molly need? *Show and label your work*

$$\begin{array}{r}
 3 \\
 \frac{2}{3} \\
 - \frac{2}{3} \text{ green squares} \\
 \hline
 1 \text{ yellow squares} \\
 + \frac{2}{3} \\
 \hline
 3 \text{ yellow squares}
 \end{array}$$

3. a. Complete the table below.  
Show your work.

	$r = 2$	$3r - 1$
$3 \times 1 - 1 = 2$	1	2
1	3	3
3	7	10
7	10	7
10	2	35
	112	

Handwritten work for part 3a includes a vertical list of numbers (1, 3, 7, 10, 2) and a sum calculation:  $1 + 3 + 7 + 10 + 2 = 23$ . There is also a calculation  $3 \times 1 - 1 = 2$  written to the left of the table.

- b. Look at the following table. Complete the table and then write the rule for the table. Show your work.

	$x$
	42
1	6
3	5
6	31
8	41
11	7

Handwritten work for part 3b includes a vertical list of numbers (6, 5, 31, 41, 7) and a sum calculation:  $6 + 5 + 31 + 41 + 7 = 90$ . There is also a calculation  $3 \times 1 - 1 = 2$  written to the left of the table. A yellow box highlights the text "Limited understanding of situation".

4. George has six pairs of pants (red, blue, tan, orange, white, and green) and three shirts (purple, yellow, and gold).

- a. George's room is totally dark due to a power outage. What is the probability he will get a pair of orange or blue pants out of the closet the first time? Write the probability as a fraction. Show and label your work.

$$\frac{2 \text{ Possibility}}{6 \text{ Total}}$$

$$\frac{2 \text{ Pants}}{6 \text{ Pants}}$$

Development toward proficiency of skills. (a and b)

- b. What is the probability that George will pick a yellow or gold shirt? Write the probability as a fraction. Show and label your work.

$$\frac{2 \text{ shirts}}{3 \text{ shirts}}$$

$$\frac{2 \text{ Possib}}{3 \text{ Total}}$$

- c. If George chooses one shirt and one pair of pants, how many possible combinations will he have to choose from? Show and label your work.

P	P	P	P	P	P	Y	Y	Y	Y	Y	
b	r	T	O	W	g	b	r	T	O	W	g
G	G	G	G	G	G						
b	r	O	W	g	r						

Handwritten work for part 4c shows a grid of combinations for shirts (P, Y) and pants (b, r, T, O, W, g). The combinations are listed as P/b, P/r, P/T, P/O, P/W, P/g, Y/b, Y/r, Y/T, Y/O, Y/W, Y/g.

5. Your family is taking a road trip during the next school break. You drive 60 miles per hour. On the first day of your trip, you will drive a total of eight hours.

a. Complete the table below to show how many miles your family will travel the first day.

		Driving Time							
Hours		1	2	3	4	5	6	7	8
Miles		60	120	180	240	300	360	420	480

1hr 60miles  
 2hr 120miles  
 3hr 180miles  
 4hr 240miles  
 5hr 300  
 6hr 360  
 7hr 420  
 8hr 480

b. On the first day of your trip your family starts driving at 6:45 a.m. You stop to eat breakfast at 9:15 a.m. How long did your family drive before stopping for breakfast? Show and label your work.

6:45  
 7:45  
 8:45  
 9:15  
 9:00  
 3hrs  
 2mins

c. While driving, your family takes the following breaks: 35 minutes for breakfast, 45 minutes for lunch, and one hour for dinner. How much time was spent on breaks? Show and label your work.

35mins  
 45mins  
 + 60mins  
 140mins

d. If your family travels 750 miles, how many hours of driving time will it take driving 60 miles per hour? Show and label your work.

480  
 540  
 600  
 700  
 4hrs 30mins

Limited process development.