

2007-08 Idaho 8th Grade Direct Mathematics Assessment

837

S O
M O

STUDENTS DO NOT WRITE IN THIS AREA

FINAL

ROUND 1

ROUND 2

T: _____ R: _____

T: _____ R: _____

Explain how you solved the problems on the assessment. If you use a calculator, show how you set up the math.

1) Michelle wants to buy a CD player at Marty's Electronics for \$87.00, a case for \$14.50, and 4 CD's for \$11.00 each.

a) How much will it cost Michelle to buy what she wants at Marty's Electronics, including a 6% sales tax?

Show or explain how you found your answer.

I Added all the cost of what Michelle want then I added 6% sales tax to get my answer

$$\begin{array}{r} 87.00 \\ 14.50 \\ 44.00 \\ \hline 145.50 \\ + 11.00 \\ \hline 156.50 \end{array}$$

$$\begin{array}{r} 117.00 \\ + 0.06 \\ \hline 117.06 \end{array}$$

Lack of process development.

b) If Michelle saves \$7.50 a week, how many weeks will it take her to have enough money to buy everything she wants? Show or explain how you found your answer.

I subtracted \$117.06 of \$7.50 to get 109.56 so Michelle would need to save up for 15 weeks.

$$\begin{array}{r} 117.06 \\ - 7.50 \\ \hline 109.56 \end{array}$$

$$\begin{array}{r} 7.50 \\ \times 15 \\ \hline 112.5 \end{array}$$

c) Michelle receives \$30.00 for her birthday. This is what fraction of the total cost? Show or explain how you found your answer.

$$\begin{array}{r} 30.00 \\ \overline{)117.06} \\ 117.06 \\ \hline \end{array}$$

If you divid 117.06 by \$30.00 you could get 3.902 of the cost the electronics Michelle wanted to buy

d) Michelle has a coupon for 15% off her purchases. With this discount, what would her CD player, case, batteries, and 4 CD's cost before sales tax? Show or explain how you found your answer.

$$\begin{array}{r} 117.00 \\ - 15\% \\ \hline 106.85 \end{array}$$

I subtracted \$117.00 from 15% before sales tax and I got answer of \$106.85 for the 15% discount

Limited understanding of situation.

**Read problems 2, 3, 4, and 5 on this and the next two pages.
 Select three problems to answer. Answer ALL of the parts of the three problems you select to answer.
 Cross out the one problem that you do not choose to answer.**

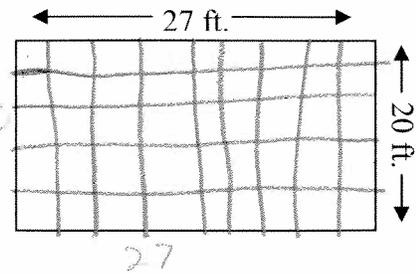
2) Sarah has a garden that is 27 ft. long and 20 ft. wide.

a) What is the perimeter of the garden?

Show or explain how you found your answer.

I added 27ft. by 20ft and put another 27ft by 20ft and got an answer of 94ft for the perimeter

$$\begin{array}{r}
 27 \\
 27 \\
 20 \\
 \hline
 94
 \end{array}$$



b) What is the area of the garden?

Show or explain how you found your answer.

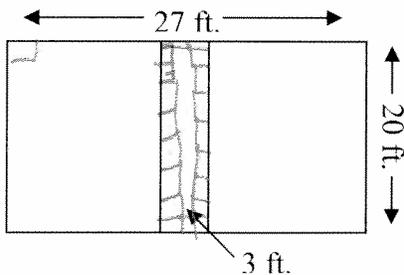
Sarah's garden has 45 square units in it.

Basic use of thinking skills.

c) Sarah wants to place a block border around the outside edges of her garden. If each block is 6 in. by 6 in., how many blocks will she need to complete the border? Show or explain how you found your answer.

Sarah will need 28 block to finish the outside border for her garden
 Count the outside edge

d) Sarah would also like to use the same size blocks to place a path down the center of the garden. The path will be 3 ft. wide. How many total blocks will she need for the border and the path? Show or explain how you found your answer.



Sarah will need 48 blocks
 28 for the border and 20 for the path.

3) The following table shows scores for students in Mr. Holverson's math class.

Students Test Scores

Name	Test 1	Test 2	Test 3	Test 4
Joe	87	82	90	96
Su-ling	94	89	90	78
Donna	62	74	95	92
Blake	87	79	85	88
Carlos	78	79	85	84

a) Find the **mean** (average), **median**, and **mode** for Test 3. Show or explain how you found your answers.

mean: 89
median: 90
mode: 90, 95

$$\begin{array}{r} 95 \\ 90 \\ 90 \\ 85 \\ + 85 \\ \hline 445 \end{array}$$

$$\begin{array}{r} 099 \\ 5 \overline{)445} \\ \underline{-40} \\ 45 \\ \underline{-45} \\ 0 \end{array}$$

95, 90, 90, 95, 95

Development toward proficiency of basic skills.

b) What is the mean of Joe's four test scores? Show or explain how you found your answer.

$$\begin{array}{r} 96 \\ 90 \\ 87 \\ + 82 \\ \hline 355 \end{array}$$

$$\begin{array}{r} 88.25 \\ 4 \overline{)355} \\ \underline{-32} \\ 35 \\ \underline{-32} \\ 3 \end{array}$$

c) If a fifth test is given, what score must Joe get to have an overall average of at least 90? Show or explain how you found your answer.

Joe would have to have 10 answers wrong to have a score of 90

Limited understanding of situation.

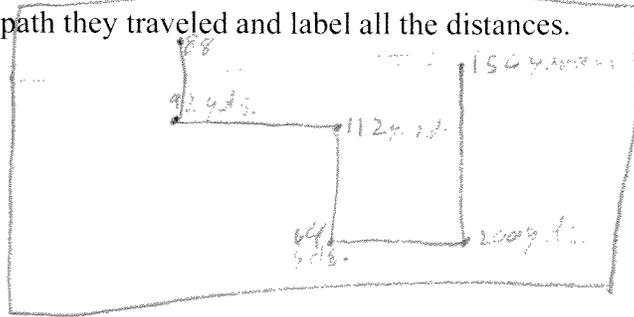
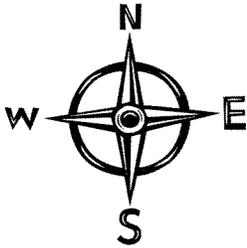
d) Which test was the easiest for the class? How do you know? Show or explain how you found your answers.

I test 3 was the easiest for the class, because 3 people got in the 90's and the other 2 people got in the 80's

Adequate solutions and processes.

- 4) Simon and his sister wanted to see how long it would take to walk all the way around the department store parking lot near their home. Starting in one corner of the lot, they walked east for 156 yards. They turned south and walked for 200 yards, then walked 64 yards west. Next they went 112 yards north, 92 yards west, and 88 yards north.

- a) Draw a diagram of the path they traveled and label all the distances.



- b) How many total **yards** did they walk? How many total **feet** did they walk? *Show or explain how you found your answers.*

Limited use of problem-solving strategies.

Simon and his sister walked $7\frac{1}{2}$ miles and in fact they walked $\frac{1}{2}$ of that.

- c) If they walked at a constant rate of four feet per second without stopping, how long did their walk take? *Show or explain how you found your answers.*

Limited structure.

I + took $2\frac{1}{2}$ hours to walk around the department parking lot

- 5) Soft drinks come in three sizes at the movie theater: small, medium, and large. The large is twice the size of the medium. The small is $\frac{1}{3}$ the size of the large.

- a) Let **m** represent the size of the medium drink. Write algebraic expressions in terms of **m** to represent the small and large drinks. *Show or explain how you found your answers.*

- b) If the medium drink is 18 ounces, how many ounces will the small drink hold? How many ounces will the large drink hold? *Show or explain how you found your answers.*

- c) The small drink costs \$1.80. The medium drink costs \$2.50. The large drink costs \$4.50. What is the cost per ounce for each size? *Show or explain how you found your answers.*