

Exhibits Above
Grade-Level Processes in
Math

4th GRADE
MAIN RANGEFINDER

4

Your teacher will read the entire test to you before you begin.
Do not use a calculator on this assessment.

1. Bill's grandma gave him a collection of comic books. Bill counted 513 Ratman comics, 970 Superdog comics, 58 T-Man comics, and 1,042 Bugboy comics.

- a. How many more Superdog comics does Bill have than Ratman comics? Show or explain how you found your answer.

⊖

970 Superdog Comics
- 513 Ratman Comics

457

CHECK
513 Ratman
+ 457

970

There is 457 more Superdog comics than Ratman

Advanced Communications

- b. How many comic books did Bill's grandma give him altogether? Show or explain how you found your answer.

⊕

CHECK
2583
- 1042

1541
- 970

571
- 513

58
- 58

0

There is 2,583 comic books all together

1,042 Bugboy
+ 970 Superdog
+ 513 Ratman
+ 58 T-man

2,583

Advanced Application of Basic Skills

- c. Bill collects 28 new comic books each year. How many new comic books will he have in three years? Show or explain how you found your answer.

⊗

28 new comics
x 3

84

CHECK
28
+ 28
+ 28

84

84 comics in 3 yrs

- d. Bill reads five comic books each week. How many weeks will it take Bill to read 30 comic books? Show or explain how you found your answer.

⊘

CHECK
5 | 30
- 30

0

6
x 5

30

It will take Bill 6 weeks

Advanced Understanding of Situations

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.



Mrs. Green's fourth grade class went on a field trip to Boise.

Field Trip Schedule

| ACTIVITY | START TIME | FINISH TIME |
|-------------------------|------------|-------------|
| Bus trip to Boise | 7:00 AM | 9:30 AM |
| Historical Museum | 9:30 AM | 10:30 AM |
| Old Penitentiary | 10:45 AM | 12:00 PM |
| Lunch in the park | 12:10 PM | 12:45 PM |
| Tour of the Capitol | 1:00 PM | 2:00 PM |
| Science Center | 2:10 PM | 3:20 PM |
| Bus trip back to school | 3:30 PM | 6:00 PM |

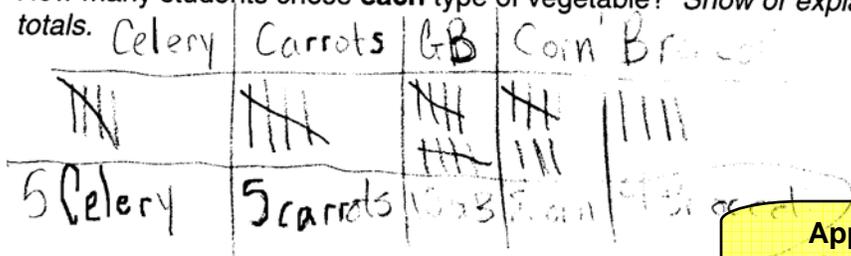


- a. Kim needs to be at school by 7:00 AM for the bus trip to Boise. It takes her 25 minutes to walk to school. What time should Kim leave home? *Show or explain how you found your answer.*
- b. How long did the class stay at the Old Penitentiary? *Show or explain how you found your answer.*
- c. How long were the students away from the school altogether? *Show or explain how you found your answer.*

3. The students in Mr. Burns' class voted for their favorite types of vegetables. The student votes are listed below.

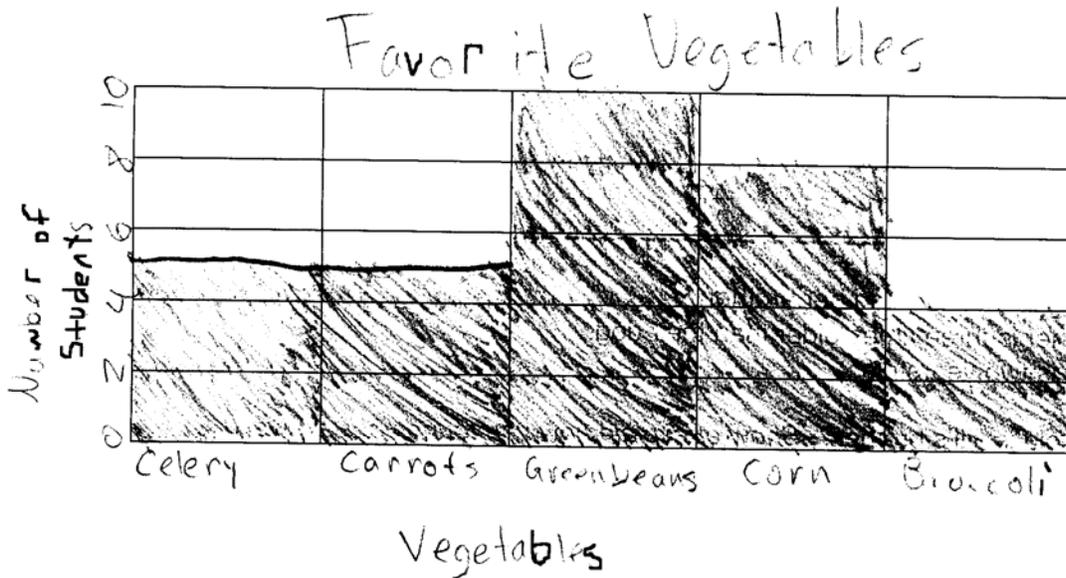
| | | | |
|-------------|-------------|-------------|-------------|
| celery | green beans | carrots | green beans |
| carrots | corn | carrots | corn |
| green beans | celery | green beans | broccoli |
| green beans | green beans | celery | green beans |
| corn | carrots | corn | celery |
| celery | corn | corn | broccoli |
| green beans | broccoli | green beans | corn |
| corn | green beans | broccoli | carrots |

a. How many students chose **each** type of vegetable? Show or explain how you found your totals.



Appropriate Processes
Accurately Completed

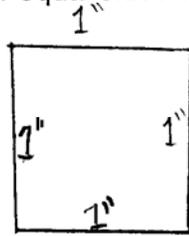
b. Complete the graph below using the class information.



c. Write two things you learned about the vegetable choices by looking at the graph.

1. Celery + Carrots got the same amount of votes with 5 votes.
2. Green beans got the most votes with 10 it got 2 more votes than Corn.

4. a. Draw a shape with four equal sides of about 1 inch and label the sides.



Minimal or Non-Existent Errors

- b. What is the **perimeter** of your shape? Show or explain how you found your answers.

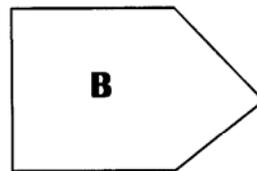
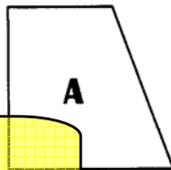
$$\begin{array}{r} 2'' \\ + 2'' \\ \hline 4'' \end{array}$$

4 inches around

CHECK

$$\begin{array}{r} 1 \text{ inch} \\ 1 \text{ inch} \\ 1 \text{ inch} \\ 1 \text{ inch} \\ \hline 4 \text{ inch} \end{array}$$

- c. Look at the two shapes below.



Higher Order Thinking Skills

How are they alike?

- 1 They both have 1 set of parallel sides
- 2 They both have 2 right angles
- 3 They both have 1 acute angle

How are they different?

- 1 A has 4 points B has 5
- 2 A has 4 sides B has 5
- 3 A has 1 obtuse angle B has 2

Advanced Mathematical Vocabulary

5. Jill is six years older than her brother.
Her brother is three times older than their dog.
The dog is two years old.

- a. How old is Jill's brother? Show or explain how you found your answer.

DOG 2

$$\begin{array}{r} 2 \\ \times 3 \\ \hline 6 \end{array}$$

4 yrs older

Her brother is 6 years old

CHECK

$$\begin{array}{r} 3 \\ + 3 \\ \hline 6 \end{array}$$

Effective Problem Solving Strategies

- b. How old is Jill? Show or explain how you found your answer.

DOG 2

BOY 6

$$\begin{array}{r} 6 \\ + 6 \\ \hline 12 \end{array}$$

Jill is 12 years old

$$\begin{array}{r} 12 \\ \times 2 \\ \hline 24 \end{array}$$

- c. Write a number sentence (equation) to show how old Jill will be in five years.

$$12 + 5 \text{ yrs} = 17 \text{ yrs old}$$

Jill will be 17