

Westgate Problem Solving Rubric

Name _____

Date _____

Skill	0 Dependent Emergent	1 Needs Support Novice	2 Needs Support Developing	3 Independent	4 Expert
Understanding Understands what the problem is asking.	Complete misunderstanding of the problem	Most of the problem misunderstood or misinterpreted	Part of the problem misunderstood or misinterpreted	Almost complete understanding of the problem	Complete understanding of the problem
Process and Strategies Selects an effective procedure and efficient strategies. Presents work logically and clearly.	No attempt	Inappropriate plan	Plan could have led to a correct solution if implemented properly	Correct plan and efficient strategy used to help solve the problem or more than 1 strategy with minor computational error(s).	Correct plan and more than 1 correct, efficient strategy used to solve the problem.
Getting an Answer Answers problem correctly with no errors.	No answer, or wrong answer – process would not lead to correct answer	Wrong answer - partial answer for a problem with multiple steps	Wrong answer - copying error (i.e. wrote 18 instead of 16) or minor computational error but correct thinking	Correct answer with no label	Correct answer and correctly labeled (i.e. 71 carrots)
Communication Communicates and justifies thinking in an organized way.	No communication or only answer provided without any label, number sentence or explanation	Little communication, very confusing, conflicting work shown, not clear what the answer is	Some communication, but answer is not justified.	Communication matches work shown and answer found (even if incorrect); justified with drawings, equation and/or word sentences.	Communication is clear with many details, matches work shown, and correct answer found and answer is clearly justified.

Key for justification:

K/1 - The student uses pictures and a number or word sentence that matches the picture to explain how the problem was solved (can be done orally).

2/3 – The student uses an equation and/or pictures as well as words (labels or in sentences) to explain how the problem was solved beyond the procedure used.

4/5 – The student uses an equation and words to explain how the problem was solved.

6 – The student uses equations and words to explain how the problem was solved and why they used those operations/strategies using mathematic vocabulary.

Comments:

Administration of SIP Mathematics Word Problem 2014-15

1. Read aloud problem to all students. Students need a visual (projected or handed out).
2. Problem can be repeated in full, but not reworded.
3. When students submit work, teachers can ask for clarification or oral explanation of their thinking. Teachers can notate what students say. Students may not change their work.
4. Grade level teams will decide whether to administer whole group or in small groups.
5. Manipulatives should be available.
6. Grades 2-6 should give students the self-assessment page with the problem.
7. The problem should be completed in one class period.
8. Use pens to discourage erasing of work.

Self-Assessment

Self-assessments are used to guide their problem solving and given with the problem. The self-assessment can be used within math instruction after the Quarter 1 problem has been given.

K/1: None (use anchor chart)

2/3/4: Primary self-assessment

5/6: Matching rubric

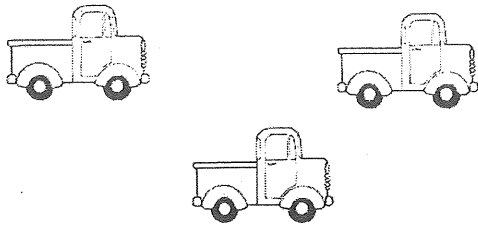
Scoring

All scoring takes place in a math CLT meeting.

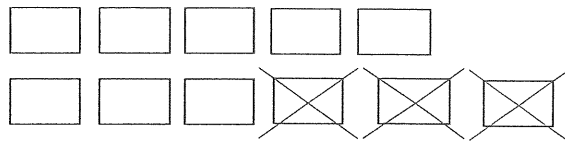
Before scoring, teachers consensus score four papers as a grade level. These will become anchor papers.

When scoring, divide each class into an equal number of piles as there are teachers in the grade level so that no one pile has an entire class, but an even mixture of the grade level for each teacher to score.

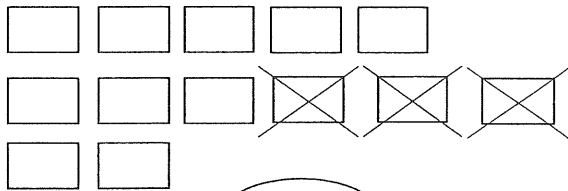
John has 11 toy cars.
 He gave three to his friend.
 Then his mom gave him 2 more.
 How many cars does he have now?



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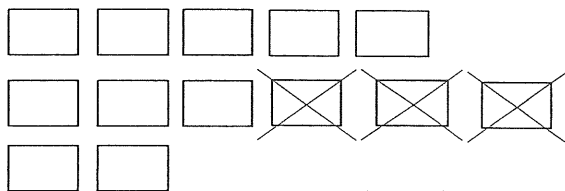


John has 11 toy cars.
 He gave three to his friend.
 Then his mom gave him 2 more.
 How many cars does he have now?



10 cars

John has 11 toy cars.
 He gave three to his friend.
 Then his mom gave him 2 more.
 How many cars does he have now?


















10 cars

$$11 - 3 = 8$$

$$8 + 2 = 10$$
















Math Problem Solving Rubric - Student Self-Assessment

Name _____ Date _____

I know what's happening in the problem.	 All of it	 Some of it	 None of it
I have a strategy to solve the problem.	 All of it	 Part of it	 None of it
I explained why I used this strategy using numbers, pictures and/or words.	 Yes, I did.	 Yes, but it's not all clear.	 No, I didn't
I showed more than one way to solve the problem.	 At least 2 ways	 Only 1 way	 I couldn't solve it.
I wrote my answer and labeled it.	 I did both	 I forgot the label.	 I didn't answer it.

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Math Problem Solving Rubric – Student Self Assessment

Date _____

Name _____		1	2	3	4	Student Score
Understanding	I did not understand the problem.	I understood parts of the problem. I got started, but I couldn't finish.	I got it. I understood the problem and have an appropriate solution. All parts of the problem are addressed.	I got it!! I did it in new ways and showed you how it worked. I can tell you what math concepts are used.		<input type="checkbox"/> <u>Comments:</u>
Process and Strategies	I couldn't get started. I don't know how to begin.	I am stuck. I have part of the solution, but now I don't know what to do. I'm not sure my answer is right. I could use some help.	I have a correct solution. I used a plan to solve the problem.	My solution is effective and inventive. I used big math ideas to solve the problem. I addressed the important details. I showed you some other ways I can solve this problem. I checked to make sure my answer is correct.		<input type="checkbox"/> <u>Comments:</u>
Communication	I did not explain how I solved the problem. I didn't use pictures, tables or graphs to show you how I solved the problem.	I explained some of what I did. I tried to use pictures, tables, graphs, and numbers to explain how I did the problem.	I clearly explained how I solved the problem. I used math language and pictures, tables, graphs, and numbers to explain how I did the problem.	I clearly detailed how I solved the problem. I included all the steps so you don't have to guess what I did. I used words, numbers, pictures, graphs, and/or models.		<input type="checkbox"/> <u>Comments:</u>

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Westgate Problems (K-6)
2014-15

(K) Sam has 11 cookies. He gave 3 cookies to his friend. Then his mom gave him 5 cookies. How many cookies does Sam have now?

(1st) John has 12 pieces of gum. He gave 4 pieces of gum to his friend. His mom gave him 2 pieces of gum. How many pieces of gum does John have now?

(2nd) In September, the second grade collected 57 Box Tops. In October, they collected 9 more Box Tops than September. How many Box Tops were collected in all?

(3rd) Allison's family bought 5 tickets to Kings Dominion. Each ticket cost \$32. They spent \$68 on food. How much money did Allison's family spend?

(4th) One morning, Dr. Easa bought a bag of carrots. Ms. Longosz and Mrs. Graf each ate 12 carrots. Mrs. Robles and Ms. Sensibaugh each ate 16 carrots. By the end of the day, Dr. Easa only had 15 carrots left. How many carrots were in the full bag?

(5th) In Battle of the Books, each team has to answer 10 questions. For each correct answer, a team receives 5 points. For each incorrect answer, a team loses 2 points. If Team Vandyken has 29 points, how many correct answers did they give?

(6th) The bakery had 4 rows of 6 chocolate chip cookies left at the end of the day. They took up $\frac{3}{4}$ of the tray. How many cookies fit on a whole tray?