

MID-POINT MATH CHECK-UPS 2009

Mid-point check-ups have been developed by teams of teachers from across the school division to assess **basic fact, computation and problem solving skills** at each grade level (one to nine) at the mid-point of the school year.

PURPOSE

The purpose of a division-wide mid-point check-up is to provide teachers with a **teacher-made** common assessment that can be discussed at the school level between grades and within PLC teams that have a math focus. These check-ups will provide a snapshot of where students are at the half-way point in the year in the three areas mentioned above. The professional discussion about the results and the sharing of successes and concerns are the key elements to the check-up.

Assessing these basic skills mid-way through the year allows time for re-emphasizing skills that are lacking and will give teachers opportunities to discuss with colleagues strategies for re-teaching and for effective opportunities for drill and practice.

Division-wide results will **not** be compiled. The results of these check-ups are for the teachers who are administering them. They will hopefully provide a common tool to generate discussion and professional dialogue around planning for the remainder of the school year. **These check-ups should be administered in January.** Principals will be asked to report the wider findings of the results as part of their annual Learning Improvement Plan. There is an attached document which teachers may find useful to lead discussion at the school level or within PLC groups at the March meetings.

The check-up is divided into three components: basic facts, computation and problem solving skills. As part of the assessment, teachers will engage in an interview portion of the assessment with each student. These check-ups will likely take 2 sittings. No time limit has been placed on the time students are allowed to take to complete the assessment. Some questions may be seen as a "post-test" assessment, while other questions may represent a "pre-test" for skills to be taught in the 2nd half of the year. Note that all of the interview questions do not have to be done by all of the students. Teacher may choose how many students do each interview question.

Questions about the assessment can be directed towards Brian, Ron or any of the math catalyst teachers.

Thanks to the following teachers who assisted in developing the midpoint assessments:



Kristin Becotte, Crystal Dodds, Margot Sauer, Susan Hrysak, Jackie Preddy, Beryl Fisher, Amanda Pockrant, Brent Keen, Deb Pylot, Tyson Mutch, Dean Powell, Laurel Derenoski, Lambert Schwartzenberger, Amber Clark, David Pero, Jason Stein, Terry Dallyn, Cindy O'Donnell, Susan Plant, Wade Worman and Cindy McKerchar.

NWSD Mid-Point Check Up

GRADE 6

Name _____ Date _____

This assessment is meant to be completed in 2 sessions. You may choose to do the one-on-one student interviews while the class is completing the written part of the assessment, or at another time.

Instruct the students to put a smile in the circle after each part of the test to indicate whether or not it was 'easy'  for them to complete or 'difficult' .

PART ONE – ORAL FACTS

Curriculum Goal: NUMBER SENSE

For oral questions, state question, give a 3 second pause and state question again with a 3 second pause

ADDITION FACTS

1. 25 (19+6)
2. 13 (8+5)
3. 19 (12+7)
4. 25 (16+9)
5. 32 (22+10)
6. 121 (81+40)
7. 88 (50+38)
8. 84 (24+60)
9. 45 (10+35)
10. 54 (20+34)

SUBTRACTION FACTS

1. 3 (9-6)
2. 5 (7-2)
3. 5 (10-5)
4. 12 (18-6)
5. 7 (20-13)
6. 19 (25-6)
7. 18 (30-12)
8. 24 (35-11)
9. 30 (42-12)
10. 30 (50-20)

MULTIPLICATION FACTS

1. 42 (6X7)
2. 40 (8X5)
3. 36 (9X4)
4. 24 (4X6)
5. 81 (9X9)

FRACTIONS

1. $\frac{1}{2} + \frac{1}{2} = \underline{1}$
2. $2 + \frac{3}{4} = \underline{2\frac{3}{4}}$
3. $\frac{1}{4} + \frac{3}{4} = \underline{1}$
4. $\frac{5}{8} + \frac{3}{8} = \underline{1}$
5. $1\frac{3}{4} + 3\frac{1}{4} = \underline{5}$

DIVISION FACTS

1. 4 (12÷3)
2. 5 (20÷4)
3. 6 (48÷8)
4. 7 (42÷6)
5. 9 (72÷8)

MENTAL MATH

1. 800 (20X40)
2. 3000 (500X6)
3. 6300 (90X70)
4. 60 (480÷8)
5. 100 (1000÷10)

PART TWO – ESTIMATION

Curriculum Goal: NUMBER SENSE

Mathematical Process: MENTAL MATHEMATICS AND ESTIMATION [ME]

1. Estimate the sum of $188+147+244+136+271$.

possible answers: 800 – 1000

Describe how you estimated the sum.

possible answers: front-end estimation, compensation

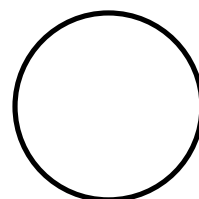
2. Estimate the product of 82×5

possible answer: 400

Describe how you estimated the product.

possible answer: rounded 82 to the nearest ten

Students! What did you think about this section of the check-up?



PART THREE – COMPUTATION

Curriculum Goal: NUMBER SENSE/Outcome: N6.4

$$\begin{array}{r} 1. \quad 50147 \\ \quad + 80 \\ \hline 50227 \end{array}$$

$$\begin{array}{r} 2. \quad 42.76 \\ \quad + 0.92 \\ \hline 43.68 \end{array}$$

$$3. \quad 4017 + 684 = 4701$$

$$4. \quad 121.34 + 73.6 = 194.94$$

$$\begin{array}{r} 5. \quad 41\,622 \\ \quad - 921 \\ \hline 40\,701 \end{array}$$

$$\begin{array}{r} 6. \quad 32.48 \\ \quad - 1.83 \\ \hline 30.65 \end{array}$$

$$7. \quad 2\,648 - 294 = 2354$$

$$8. \quad 941.6 - 22.9 = 918.7$$

$$\begin{array}{r} 9. \quad \frac{5}{8} \\ \quad + \frac{1}{8} \\ \hline \frac{6}{8} \end{array}$$

$$10. \quad \frac{5}{8} - \frac{3}{8} = \frac{2}{8} = \frac{1}{4}$$

$$11. \quad 3\frac{6}{10} + \frac{3}{10} = 3\frac{9}{10}$$

$$12. \quad 2\frac{7}{10} - 1\frac{3}{10} = 1\frac{4}{10} = 1\frac{2}{5}$$

Teacher Copy

$$\begin{array}{r} 13. \quad 38 \\ \quad \underline{\times 7} \\ \quad 266 \end{array}$$

$$14. \quad 24 \times 18 = 432$$

$$\begin{array}{r} 15. \quad 1.65 \\ \quad \underline{\times 4} \\ \quad 6.60 \end{array}$$

$$16. \quad 203.7 \times 7 = 1425.9$$

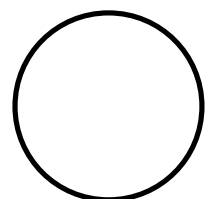
$$17. \quad 8 \overline{) 296}^{37}$$

$$18. \quad 921 \div 6 = 153r3$$

$$19. \quad 28.6 \div 5 = 5.7r1$$

$$20. \quad 4 \overline{) 32.68}^{8.17}$$

Students! What did you think about this section of the check-up?



PART FOUR – NUMBER SENSE

Curriculum Goal: NUMBER SENSE/Outcome: N6.4

1. Fill in the missing numbers in these sequences: Outcome: P.6I

a) 6, 12, 18, 24, 30, 36, 42b) 1, 2, 4, 8, 16, 32, 64, 128

2. 468 505 011

Outcome: N.6I

Round this number to the:

nearest ten million

470 000 000

nearest hundred thousand

468 500 000

nearest one thousand

468 505 000

hundred

468 505 000

3. Complete the table.

Outcome: N.6I

STANDARD	WRITTEN WORD
1 093	one thousand ninety three
1 900 063	one million nine hundred thousand sixty three
93.47	ninety three and forty seven hundredths
0.414	four hundred fourteen thousandths

4. Arrange these numbers in decreasing order. Outcome: N.6I

42.8 428.4 14.2 4028 4.082

4028, 428.4, 42.8, 14.2, 4.082

5. Order these numbers from least to greatest. Outcome: N.6I

1 260 000, 984 812, 1 298 126, 2 000 124, 1 298 214

984 812, 1 260 000, 1 298 126, 1 298 214, 2 000 124

6. Hidden digits.

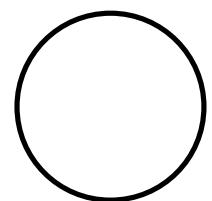
Outcome: N.6I

$$\begin{array}{r} \text{a) } 2564 \\ +6735 \\ \hline 9299 \end{array}$$

$$\begin{array}{r} \text{b) } 8075 \\ - 822 \\ \hline 7253 \end{array}$$

$$\begin{array}{r} \text{c) } 67 \\ \times 42 \\ \hline 134 \\ 2680 \\ \hline 2814 \end{array}$$

Students! What did you think about this section of the check-up?



PART FIVE – WORD PROBLEMS

Mathematical Process: PROBLEM SOLVING [PS]

1. Zachary has 24 kayaks. He rents out a kayak for \$14 per hour. All the kayaks are rented for 8 hours. How much money will Zachary get?
Which strategy did you use? Please describe or choose from the list.

1 kayak rental $\$14 \times 8 = \112

24 kayaks $\$112 \times 24 = \2688.00

Possible Strategies: Solve a simpler problem.
 Make an open number sentence (ie. $__ \times 6 = 24$)

2. There are 12 more girls than boys in the gym. Altogether there are 34 students. How many are boys? *Which strategy did you use? Please describe or choose from the list.*

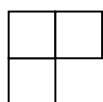
There are 11 boys.

Possible Strategies: Draw a picture
 Guess and check

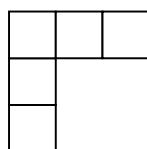
3. How many squares would be in the 10th design?
Which strategy did you use? Please describe or choose from the list.



1st



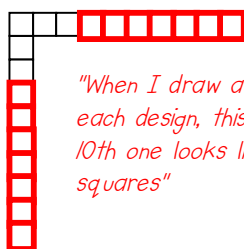
2nd



3rd

Possible Strategies: Make a Table
 Draw a Picture
 Use a pattern

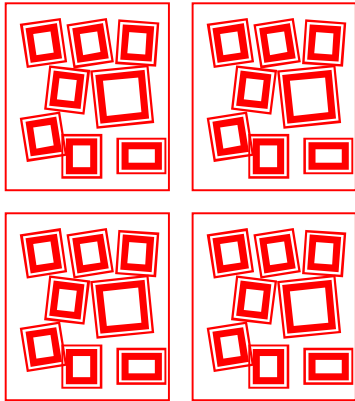
Design #	# of squares
1 st	1
2 nd	3
3 rd	5
4 th	7
5 th	9
6 th	11
7 th	13
8 th	15
9 th	17
10 th	19



"When I draw a picture for each design, this is what the 10th one looks like. I count 19 squares"

4. Tracey wants to put 8 pictures on each scrapbook page. She has 32 pictures in total. How many pages will she make? *Solve this problem using 2 different strategies. Which strategies did you use? Please describe or choose from the list.*

Possible Strategies: Draw a Picture



Make an open number sentence.

$$32 \div 8 = \underline{\quad}$$

$$\begin{array}{r} \overline{)32} \\ 8 \end{array}$$

5. Which number less than 30 has the most factors?
Which strategy did you use? Please describe or choose from the list.

Possible Strategies: Guess and check.
Use divisibility rules.

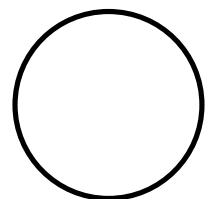
$$1 \times 24 = 24$$

$$2 \times 12 = 24$$

$$3 \times 8 = 24$$

$$4 \times 6 = 24$$

Students! What did you think about this section of the check-up?



PART SIX – MENTAL MATH STRATEGIES INTERVIEW

Teachers: Have the student tell you how they could calculate the following questions without the use of a pencil. Jot down the students' response on the separate sheet provided. The possible strategy listed in red is only one of many possible strategies, students may choose to use. Responses will tell you how students are able to break numbers down and put them back together.

For this section, you may have each student do all of the strategy sections or a few of your students (4 or 5) could do one. This section should be done with the homeroom teacher, not another adult. Have the student record their answer on their sheet.

ADDITION STRATEGIES

1. $405 + 303 =$ front end addition
2. $12\ 000 + 2004 =$ add place values

SUBTRACTION STRATEGIES

1. $1100 - 1092 =$ counting up
2. $804 - 600 =$ subtract place values

MULTIPLICATION STRATEGIES

1. $80 \times 30 =$ make an easier question (8×3), then add the zeros
2. $2000 \times 24 =$ double 24 and add the zeros

DIVISION STRATEGIES

1. $8000 \div 10 =$ annexing zeros
2. $260 \div 2 =$ think: What is half of 26?

PROBLEM SOLVING STRATEGIES

There are some dogs in the park. You see 12 more legs than tails. How many dogs are there? *"I will guess and check. Some dogs means more than one so I will try 2 dogs. There would be 2 tails and 8 legs. This means there are 6 more legs than tails. This is half of 12 so, I will double my guess. Could it be 4 dogs? 4 dogs means 4 tails and 16 legs. $16 - 4 = 12$, so this answer is right!"*