

## Mid-Point Math Check-ups 2009/10

Mid-point check-ups have been developed by teams of teachers from across the school division to assess **basic facts, 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.

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 2<sup>nd</sup> half of the year.

Note that all of the **interview questions** do not have to be done by all of the students. Teachers 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 Hryszak, 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.

**Grade 5 Mid-Point  
Math Check-up  
(Teacher Copy)**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Please note that the last page of this check-up will be done with your teacher in the form of an **interview**.

**PART 1 - Basic Facts and Computation**

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

**A. Oral Addition and Subtraction**

1. \_\_\_\_\_ (8+4) **12**
2. \_\_\_\_\_ (9+3) **12**
3. \_\_\_\_\_ (7+7) **14**
4. \_\_\_\_\_ (9+8) **17**
5. \_\_\_\_\_ (7+6) **13**
6. \_\_\_\_\_ (16-9) **7**
7. \_\_\_\_\_ (19-10) **9**
8. \_\_\_\_\_ (17-9) **8**
9. \_\_\_\_\_ (15-8) **7**
10. \_\_\_\_\_ (13-5) **8**

**B. Oral Multiplication Facts**

1. \_\_\_\_\_ (3x3) **9**
2. \_\_\_\_\_ (4x7) **28**
3. \_\_\_\_\_ (5x6) **30**
4. \_\_\_\_\_ (6x9) **54** (N5.2)
5. \_\_\_\_\_ (4x5) **20**
6. \_\_\_\_\_ (7x9) **63**
7. \_\_\_\_\_ (9x9) **81**
8. \_\_\_\_\_ (7x8) **56**
9. \_\_\_\_\_ (5x5) **25**
10. \_\_\_\_\_ (6x8) **48**

**C. Oral Division Facts**

1. \_\_\_\_\_ (12÷3) **4**
2. \_\_\_\_\_ (10÷2) **5**
3. \_\_\_\_\_ (18÷6) **3**
4. \_\_\_\_\_ (35÷5) **7** (N5.3)
5. \_\_\_\_\_ (16÷4) **4**
6. \_\_\_\_\_ (28÷4) **7**
7. \_\_\_\_\_ (9÷3) **3**
8. \_\_\_\_\_ (36÷6) **6**
9. \_\_\_\_\_ (45÷5) **9**
10. \_\_\_\_\_ (64÷8) **8**

## D. Computation:

### Addition

$$\begin{array}{r} 1. \quad 6382 \\ + 835 \\ \hline 7217 \end{array}$$

$$\begin{array}{r} 2. \quad 3947 \\ \quad 643 \\ + 1793 \\ \hline 6383 \end{array}$$

### Subtraction

$$\begin{array}{r} 1. \quad 362 \\ - 45 \\ \hline 317 \end{array}$$

$$\begin{array}{r} 2. \quad 6002 \\ - 421 \\ \hline 5581 \end{array}$$

$$\begin{array}{r} 3. \quad 7821 \\ - 2433 \\ \hline 5388 \end{array}$$

### Multiplication (N5. 2)

$$\begin{array}{r} 1. \quad 587 \\ \times 6 \\ \hline 3522 \end{array}$$

$$\begin{array}{r} 2. \quad 26 \\ \times 71 \\ \hline 1846 \end{array}$$

$$\begin{array}{r} 3. \quad 55 \\ \times 29 \\ \hline 1595 \end{array}$$

Division (N5. 3)

$$1. \quad \begin{array}{r} 33 \text{ R } 0 \\ 6 \overline{) 198} \end{array}$$

$$2. \quad \begin{array}{r} 63 \text{ R } 0 \\ 7 \overline{) 441} \end{array}$$

Expanded Notation

1. Re-write the number 12 158 using **expanded notation**: (N5.1)

$$(\overset{1}{\text{---}} \times \overset{10000}{\text{---}}) + (\overset{2}{\text{---}} \times \overset{1000}{\text{---}}) + (\overset{1}{\text{---}} \times \overset{100}{\text{---}}) + (\overset{5}{\text{---}} \times \overset{10}{\text{---}}) + (\overset{8}{\text{---}} \times \overset{1}{\text{---}})$$

## Fractions

1. Circle the fractions that are equal to  $\frac{1}{3}$  :

$\frac{7}{14}$

$\frac{3}{9} *$

$\frac{6}{12}$

$\frac{5}{15} *$

$\frac{2}{24}$

$\frac{8}{16}$

$\frac{4}{12} *$

2. Circle the fractions that are equal to  $\frac{1}{2}$  :

$\frac{7}{14} *$

$\frac{3}{9}$

$\frac{6}{12} *$

$\frac{5}{15}$

$\frac{2}{24}$

$\frac{8}{16} *$

$\frac{4}{12}$

3. Arrange these fractions from the smallest to the largest:

$\frac{1}{2}$

$\frac{1}{5}$

$\frac{1}{8}$

$\frac{1}{4}$

( $\frac{1}{8}$   $\frac{1}{5}$   $\frac{1}{4}$   $\frac{1}{2}$ )

Easy



Hard

**Problem Solving Strategies - Grade 5-** - for the following questions please feel free to pick from this list when asked "what strategy did you use?"

- 1) Act it Out
- 2) Use a Model
- 3) Draw a Picture
- 4) Guess and Test
- 5) Look for a Pattern
- 6) Use an Open Sentence
- 7) Make a Chart, Table or Graph
- 8) Solve a Simpler Problem
- 9) Consider all Possibilities
- 10) Consider Extreme Cases
- 11) Make an Organized List
- 12) Work Backward
- 13) Use Logical Reasoning
- 14) Change Your Point of View
- 15) Other (explain)

## Part II -Problem Solving

1. Turtleford Community Center can seat 220 people. Meadow Lake Arena can hold 1155 people. If Turtleford and Meadow Lake both charge 4 dollars per seat, **calculate** how much more money the Meadow Lake Arena will get for a sold out game to Turtleford. (N5.2)



3740.00

What Problem Solving Strategy did you use?

2. The week before school began, 15 927 students were enrolled at the University of Saskatchewan. On the first day of classes, only 13 805 students were enrolled. **Estimate** how many students

cancelled their enrollment. (N5.4)

2122

What Problem Solving Strategy did you use?



3. Meaghan bought a MP3 player. She made a 40 dollar down payment and agreed to pay the rest over 6 months and pay 15 dollars a month. How much did she pay altogether?

130

What Problem Solving Strategy did you use?



4. Ms. Mutch, a math teacher, wants to buy calculators. The calculators cost \$15.99 dollars each, but are on sale for \$11.25 each. How much did she save by buying 10 calculators?

\$47.40

What Problem Solving Strategy did you use?



5. 272 children are expected to attend the school fair. Each child is to receive one balloon. If 8 balloons come in a pack, how many packs will be needed?

34

What Problem Solving Strategy did you use?



### Part III -Interview Questions

Call out each student individually to do only one of the following 4 sections (Have  $\frac{1}{4}$  of the class do each section. For a class of 20, 5 students would complete the addition section, 5 students would complete

the subtraction section and so on.)

Show the student the equation and ask them to calculate the answer without the use of paper and pencil. Record their answer and ask them to explain how they got their answer. Jot down their responses. The possible strategy listed is only one of many possible strategies students may choose to use.

#### Addition

1.  $43 + 26 = \underline{\quad}$  (possible strategy...adding  $43+20$  and then adding  $6$ )
2.  $38 + 42 = \underline{\quad}$  (possible strategy...adding  $30+40$  and  $8+2$ , then adding  $70+10$ )
3.  $299 + 26 = \underline{\quad}$  (possible strategy...adding  $1$  to  $299$  to make  $300+26$  then subtracting  $1$  from the total)
4.  $225 + 225 = \underline{\quad}$  (possible strategy...doubling  $200$  and doubling  $25$  and then adding the totals)

#### Subtraction

1.  $50 - 36 = \underline{\quad}$  (possible strategy...counting up... $36+4=40$ , plus  $10$  more is  $50$ )
2.  $74 - 37 = \underline{\quad}$  (possible strategy... " " ... $37+14=44$ , plus  $30$  more is  $74$ )
3.  $76-29 = \underline{\quad}$  (possible strategy...add  $1$  to  $29$  to make  $30$ , subtract and take away  $1$  from the total OR add  $1$  to both numbers and subtract)
4.  $500 - 249 = \underline{\quad}$  (possible strategy...take away  $1$  from both numbers and subtract OR add  $1$  to  $249$  to make  $250$ , double  $250$  to get to  $500$  and add the  $1$  back= $251$ )

#### Multiplication

1.  $52 \times 7 = \underline{\quad}$  (possible strategy... $(50 \times 7) + (2 \times 7)$ )
2.  $36 \times 9 = \underline{\quad}$  (possible strategy... $36 \times 10 = 360 - 9$ )
3.  $24 \times 25 = \underline{\quad}$  (possible strategy... $4 \times 25 = 100$ , then  $100 \times 20$ )
4.  $12 \times 50 = \underline{\quad}$  (possible strategy...halve  $12$  to  $6$ , double  $50$  to  $100$  then  $6 \times 100$ )

#### Division

1.  $160 \div 40 = \underline{\quad}$  (possible strategy...take of common zero  $16$  divide  $4=4$  and add zero back on)
2.  $350 \div 7 = \underline{\quad}$  (possible strategy...drop zero,  $35$  divided by  $7$  then add the zero back on)
3.  $268 \div 2 = \underline{\quad}$  (possible strategy...decompose and divide... $200+60+8$  and halve each... $100+30+4=134$ )

Name: \_\_\_\_\_

## Response Sheet to Interview Questions

### Addition

1.  $43 + 26 =$  \_\_\_\_\_

2.  $38 + 42 =$  \_\_\_\_\_

3.  $299 + 26 =$  \_\_\_\_\_

4.  $225 + 225 =$  \_\_\_\_\_

\_\_\_\_\_   
number of students who did this section  
(please check)

### Subtraction

1.  $50 - 36 =$  \_\_\_\_\_

2.  $74 - 37 =$  \_\_\_\_\_

3.  $76 - 29 =$  \_\_\_\_\_

4.  $500 - 249 =$  \_\_\_\_\_

\_\_\_\_\_   
number of students who did this section  
(please check)

Name: \_\_\_\_\_

## Student Response Sheet to Interview Questions

### Multiplication

1.  $52 \times 7 =$  \_\_\_\_\_

2.  $36 \times 9 =$  \_\_\_\_\_

3.  $24 \times 25 =$  \_\_\_\_\_

4.  $12 \times 150 =$  \_\_\_\_\_

\_\_\_\_\_   
 number of students who did this section   
 (please check)

### Division

1.  $160 \div 40 =$  \_\_\_\_\_

2.  $350 \div 7 =$  \_\_\_\_\_

3.  $468 \div 2 =$  \_\_\_\_\_

\_\_\_\_\_   
 number of students who did this section   
 (please check)