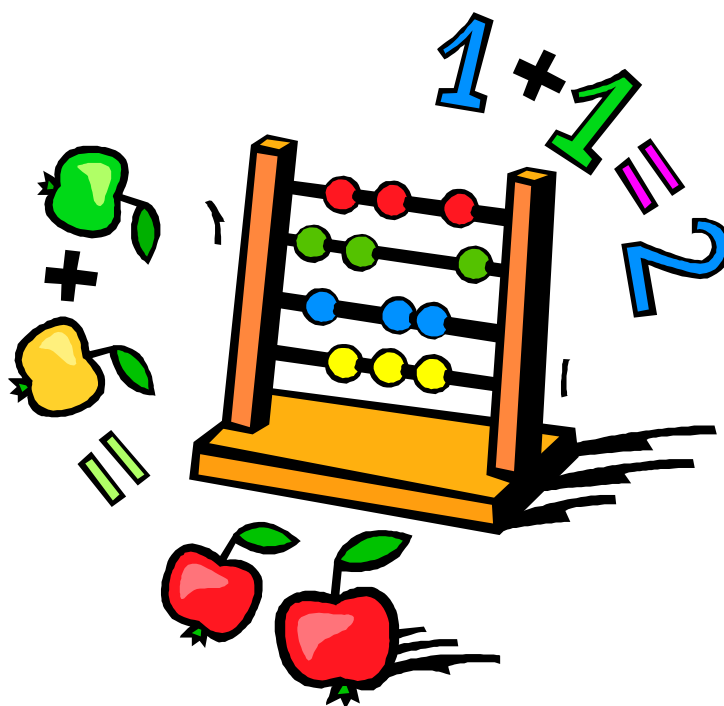End of Grade 4 I.R.P.

Beginning of Grade 5

Diagnostic Math Assessment

Last updated: February 5, 2008
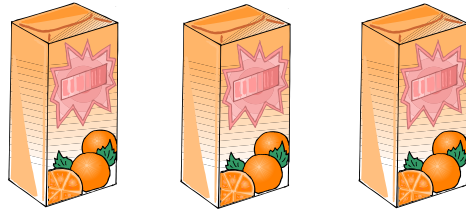
WNCP
Edition

Vancouver IslandNet
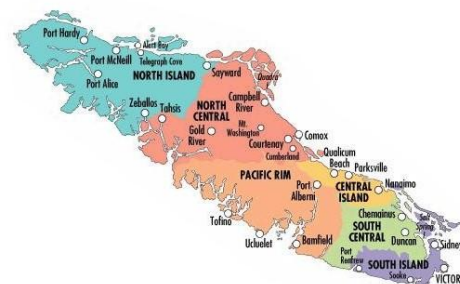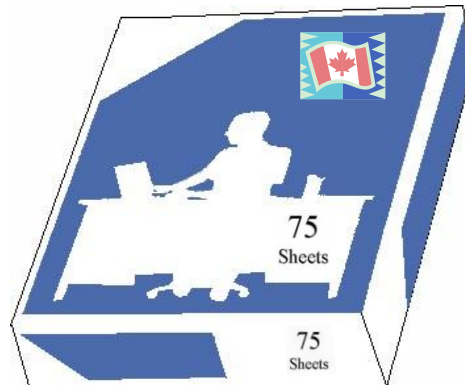
1) Juice costs $1.25 for one carton.
   How much will three cartons of juice cost?

      A $2.50

      B $3.25

      C $3.75

      D $4.75

2) A package of paper has 75 sheets.
   There are three students.
   How many sheets of paper will each student get if the package is shared equally?

      A 22

      B 25

      C 72

      D 78

3) What is the value of the underlined digit?

   3 **3** 3 3

      A Three

      B Thirty

      C Three hundred

      D Three thousand

4) What is the largest number that can be made using the digits?

    A 4762

    B 6742

    C 7462

    D 7642

```
 6      2

 7      4
```

5) What is the numeral for nine thousand six hundred two?

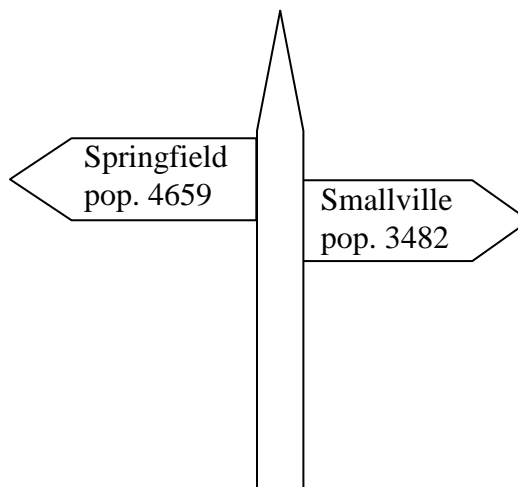   A 6290

    B 9260

    C 9602

    D 9620

6) Smallville has 3482 people.
Springfield has 4659 people.
What is the total population of both cities?

    A 7131

    B 7141

    C 8131

    D 8141

Springfield
pop. 4659

Smallville
pop. 3482

7) Mr. Rennie's class read 6808 books.
Mrs. Nelson's class read 5764.
How many more books did Mr. Rennie's class read than Mrs. Nelson's class?

    A 1044

    B 1064

    C 1164
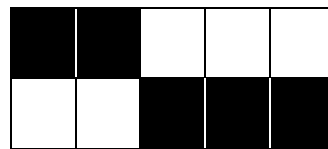
    D 2572

8) Which fraction of the diagram is black?

    A $\dfrac{1}{5}$

    B $\dfrac{1}{4}$
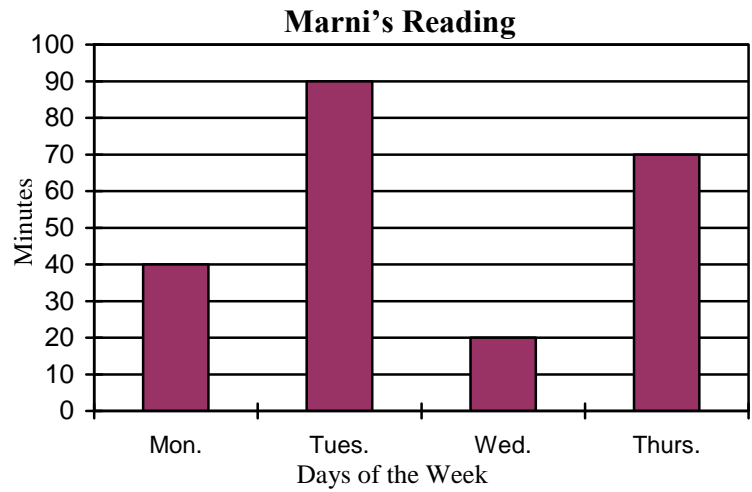
    C $\dfrac{1}{3}$

    D $\dfrac{4}{5}$

9) What part of the diagram is black?

    A 0.2

    B 0.3

    C 0.5

    D 0.8

10) The graph below shows how many minutes Marni read in one week.
On which day did she read for 70 minutes?

Marni's Reading

A   Monday

B   Tuesday

C   Wednesday

D   Thursday

11) How would you write 0.25 as a common fraction?

A $\dfrac{25}{1}$

B $\dfrac{25}{10}$

C $\dfrac{25}{100}$

D $\dfrac{1}{25}$

12)   12, 8, 11, 7, __, __, __
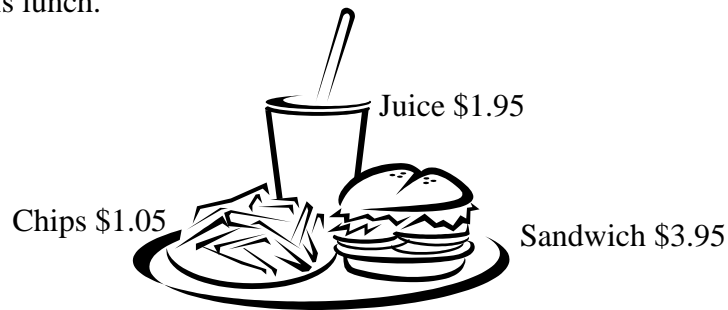
If the pattern continues, what are the next 3 numbers?

A   7, 3, 6

B   10, 6, 9

C   8, 6, 4

D   7, 5, 3

13) There are 20 hockey sticks at a bench.
Every fourth stick is yellow.
How many yellow sticks are there?

      A 4

      B 5

      C 6

      D 7

14) Alex buys this lunch.

Juice $1.95

Chips $1.05

Sandwich $3.95

About how much will he spend?

      A $6.00

      B $7.00

      C $7.50

      D $8.00

15) Gurdit had some jelly beans.
He gave 14 to Lee.
Gurdit had 20 left.
How many did he have to start with?

Which equation best represents this problem?

      A $20 - x = 14$

      B $20 - 14 = x$

      C $x - 20 = 14$

      D $x - 14 = 20$

16) A slice of pizza costs $2.75.
Paul buys two slices of pizza.
How much change should he get back from a $10 bill?

      A $4.50
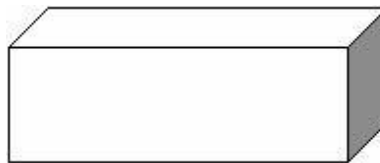
      B $5.50

      C $6.00

      D $7.25

17) There are 18 hockey cards in a box.
How many hockey cards are in 5 boxes?

Which equation best represents this problem?

      A $18+5=n$

      B $18-n-5$

      C $18\times5=n$

      D $18\div5=n$
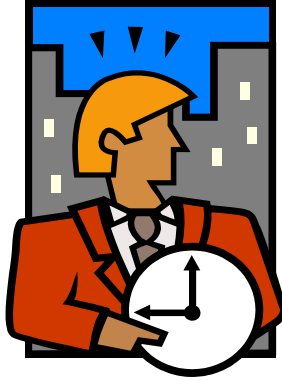
18) What is the name of this shape?

      A cube

      B rectangle
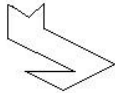
      C rectangular prism

      D triangular prism

19) What is the same time as 9:00 p.m.?

    A 0900 h

    B 1800 h

    C 1900 h

    D 2100 h

20) What shape below is **not** symmetrical??

A

B

C

D

21) How many different rectangles can you make with 12 square tiles? (You must use all tiles for each rectangle)

    A 1

    B 2

    C 3

    D 4

22) How many kilometres will Cindy jog in 5 hours?

A 18 km

B 20 km

C 22 km

D 24 km

Cindy's Jog

Hours	Kilometres
1	4
2	8
3	12
4	16
5	?

23)

September 2006

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

The circled date on the calendar can be expressed as:

A 2006/08/20

B 2006/09/20

C 2006/10/20

D 2007/10/20

24) Solve this equation:

$$35 \div x = 7$$

    A 3

    B 4

    C 5

    D 6

25) What unit would be best to measure the area of a gym floor?

    A mm^2

    B cm^2

    C m^2

    D km^2

■ End of Multiple Choice Questions ■

Problem Solving - Written Response

26) An ice cream stand has five flavours:

| Bubble gum | Licorice | Raspberry | Marshmallow | Chocolate |

Richard would like two **different** flavours on his ice cream cone.

Show **all** the possible combinations.

27) Construct a bar graph showing students' favourite food.

Favourite Food

Food	# of Students
Hot dogs	16
Hamburgers	12
Pizza	9
Subs	11

Include a title, labels and scale on your graph.
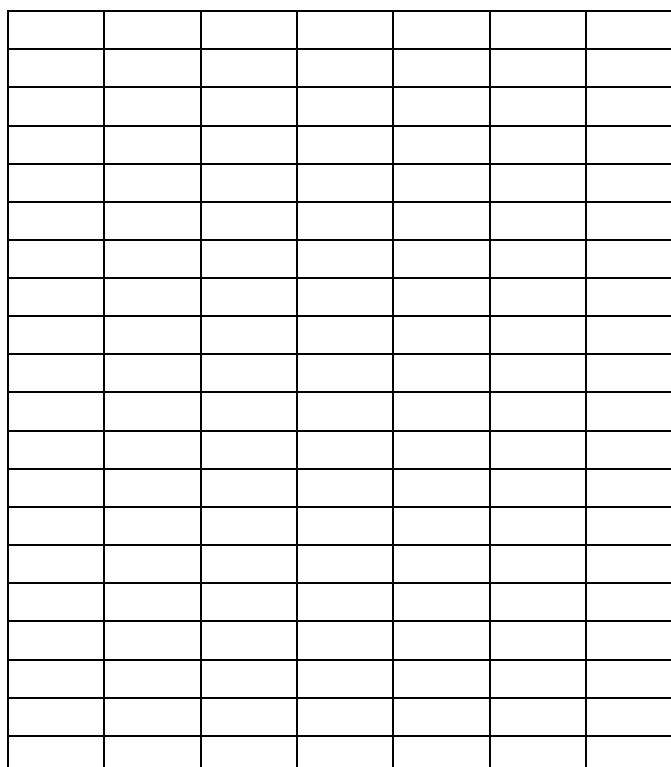
28) A garden has an area of 36 m².

   Draw all the different **squares** or **rectangles** the garden could be.

   Label the length and width on each garden.

29) There are red stickers and green stickers.

Richelle bought four stickers.

List all the different combinations she can buy.

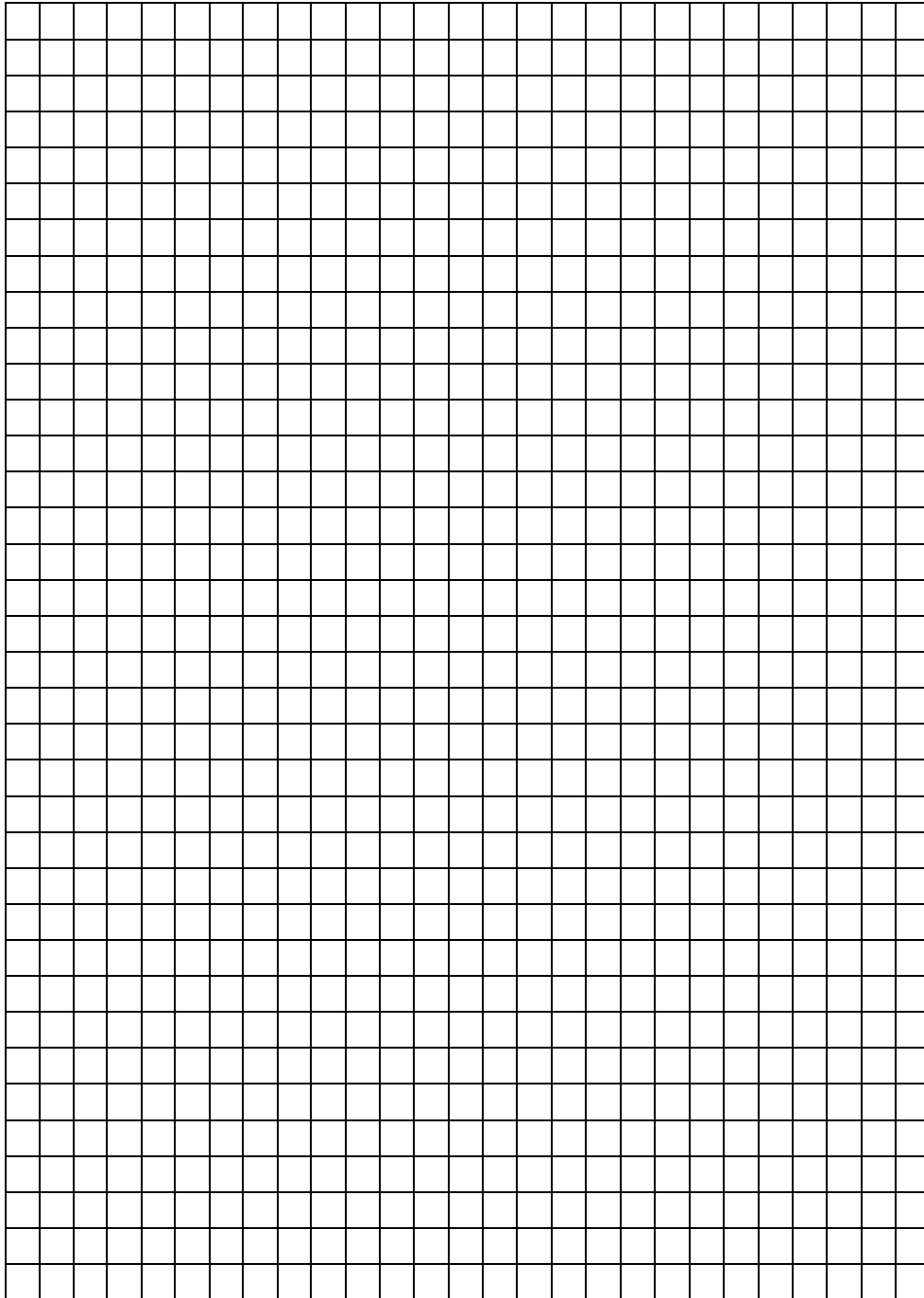# BASIC MATH COMPUTATION from Grade 4

158 - 35 =	235 - 16 =	607 - 32 =	1756 + 169 =
789 + 276 =	2604 - 437 =	235 + 465 + 20 =	8 x 7 =
4 x 3 x 9 =	34 x 2 =	56 x 5 =	129 x 8 =
40 ÷ ___ = 8	96 ÷ 3 =	26 ÷ 5 =	45 ÷ 4 =

Answer Key

Strand

1. C (Number) Operations
2. B (Number) Operations
3. C (Number) Place value
4. D (Number) Compare and Order
5. C (Number) Word to Numeral form
6. D (Number) Operations
7. A (Number) Operations
8. A (Number) Fractions
9. C (Number) Decimal
10. D (Statistics & Probability) Data Analysis
11. C (Number) Dec. to Fract.
12. B (Number) Pattern - extending
13. B (Number) Pattern

14. B (Number) Estimation
15. D (Patterns) Equation
16. A (Number) Money
17. C (Patterns) Equation
18. C (Shape & Space) 3-D Recognition
19. D (Shape & Space) 24 hr clock
20. A (Shape & Space) Symmetry
21. C (Shape & Space) Area
22. B (Patterns) Predicting/ Charts
23. B (Shape & Space) Calendar
24. C (Patterns) Equations
25. C (Shape & Space) Area

26.   BL   LR   RM   MC
       BR   LM   RC
       BM   LC
       BC

1	2	3	4
▪ A start beyond copying that shows some understanding	▪ Successfully reached a sub goal (1 to 4 combinations)	▪ Appropriate strategy applied but ignored a condition (e.g., 5 to 8 combinations or doubled a flavour)	▪ 10 correct combinations or minor error (e.g., repeated 1 or 2 combinations)

27. Aspects of the graph:
- ▪ Bars are not touching
- ▪ Title
- ▪ X and Y labels
- ▪ Appropriate scale

1	2	3	4
▪ A start beyond copying that shows some understanding	▪ Successfully reached a sub goal ▪ Used an appropriate strategy but not carried out far enough (ie. Two aspects of the graph are missing)	▪ Appropriate strategy applied but one aspect of the graph is missing	▪ Completed all sub goals ▪ All aspects of the graph are correct ▪ Minor copy error

28. 1 x 36, 2 x 18, 3 x 12, 4 x 9, 6 x 6

1	2	3	4
▪ Draws a rectangle	▪ Has 2 correct shapes with correct dimensions	▪ 3 or 4 correct shapes with dimensions or ▪ Appropriate strategy but ignored a condition (e.g., 4 x 9 duplicated as a 9 x 4)	▪ 5 correct shapes with dimensions or ▪ Minor copying error

29.

Red	Green
0	4
1	3
2	2
3	1
4	0

1	2	3	4
▪ A start beyond copying that shows some understanding	▪ Successfully reaches a sub goal (1 or 2 combinations)	▪ Appropriate strategy applied but ignored a condition (3 or 4 combinations)	▪ 5 correct combinations with clear strategy

Basic Math Computations

123	219	575	1925
1065	2167	720	56
108	68	280	1032
5	32	5.2 5 R1 $5\frac{1}{5}$	11.25 11 R1 $11\frac{1}{4}$

Quick Scale: Grade 4 Numeracy

This Quick Scale *is a summary of the criteria described in detail in the* Rating Scale *that follows. These criteria may apply at any time of the year, depending when specific skills or concepts are introduced.*

Aspect	Not Yet Within Expectations	Meets Expectations (Minimal Level)	Fully Meets Expectations	Exceeds Expectations
Snapshot	**The student may be unable to complete the task without ongoing help; cannot follow procedures independently.**	**The work satisfies most basic requirements of the task, but it is *flawed or incomplete in some way*. The student may need some help.**	**Work is complete and accurate (may include minor flaws or errors). The student is able to develop a simple extension.**	**Work is complete, accurate, and efficient. The student may find an alternative or a shortcut, or develop an extension.**
Concepts and Applications* ▪ recognizing mathematics ▪ grade-specific concepts, skills ▪ patterns, relationships	▪ may be unable to identify the basic concepts and procedures needed ▪ work is inaccurate or incomplete ▪ may need one-to-one support to identify simple patterns and relationships	▪ identifies some of the concepts and procedures needed ▪ applies most relevant concepts and skills appropriately; some errors or omissions ▪ identifies simple patterns and relationships if prompted (e.g., to make predictions)	▪ identifies concepts and procedures needed ▪ applies relevant concepts and skills; may be somewhat inefficient or make minor errors. ▪ identifies, explains, and uses simple patterns and relationships	▪ identifies concepts and procedures needed; may propose alternative solutions ▪ applies relevant concepts and skills efficiently; precise ▪ identifies, explains, and uses patterns and relationships; may notice subtle patterns
Strategies and Approaches ▪ procedures ▪ estimates to verify solutions	▪ cannot break the task into stages, steps, or sections ▪ unable to verify results or solutions	▪ tries to follow instructions; does not check or adjust procedures ▪ needs help to verify results or solutions	▪ structures the task logically; may be inefficient ▪ if asked, verifies results or solutions	▪ structures the task efficiently ▪ may independently verify results or solutions
Accuracy ▪ recording, calculations	▪ may include major errors in recording or calculations	▪ may include some recording or calculation errors; comparisons are generally reasonable	▪ recording and calculations are generally accurate; may be minor errors	▪ accurate recording and calculations, including units, may use mental math
Representation and Communication ▪ presenting work ▪ constructing charts, diagrams, displays ▪ explaining procedures, results	▪ work may be unclear and confusing ▪ may omit or make major errors in tables, charts, displays, diagrams. ▪ may be unable to explain procedures and results	▪ work may be confusing in places ▪ includes most required tables, charts, displays and diagrams; some errors or omissions ▪ explanations and conclusions may be incomplete; little mathematical language	▪ work is generally clear, easy to follow ▪ required tables, charts, graphs, and diagrams are generally accurate; minor errors or omissions ▪ offers logical explanations and conclusions; some mathematical language	▪ work is clear and easy to follow ▪ required tables, charts, graphs, diagrams are accurate and complete ▪ offers logical explanations and conclusions; uses mathematical language

* You may want to list key curriculum concepts or skills for a particular task.

_____ _____ _____

_____ _____ _____