

Number Sense and Numeration

Appendix 15 q

$0 + 0 =$	$0 + \overset{\bullet}{1} =$
$0 + \overset{\bullet}{2} =$	$0 + \overset{\bullet\bullet}{3} =$
$0 + \overset{\bullet\bullet}{4} =$	$0 + \overset{\bullet\bullet\bullet}{5} =$
$0 + \overset{\bullet\bullet\bullet}{6} =$	$0 + \overset{\bullet\bullet\bullet\bullet}{7} =$
$0 + \overset{\bullet\bullet\bullet\bullet}{8} =$	$0 + \overset{\bullet\bullet\bullet\bullet\bullet}{9} =$

Appendix 15 r

$$\begin{array}{c} \bullet \\ 1 \end{array} + 0 =$$

$$\begin{array}{c} \bullet \\ 1 \end{array} + \begin{array}{c} \bullet \\ 1 \end{array} =$$

$$\begin{array}{c} \bullet \\ 1 \end{array} + \begin{array}{c} \bullet \\ \bullet \\ 2 \end{array} =$$

$$\begin{array}{c} \bullet \\ 1 \end{array} + \begin{array}{c} \bullet \\ \bullet \\ \bullet \\ 3 \end{array} =$$

$$\begin{array}{c} \bullet \\ 1 \end{array} + \begin{array}{c} \bullet \\ \bullet \\ \bullet \\ 4 \end{array} =$$

$$\begin{array}{c} \bullet \\ 1 \end{array} + \begin{array}{c} \bullet \\ \bullet \\ \bullet \\ \bullet \\ 5 \end{array} =$$

$$\begin{array}{c} \bullet \\ 1 \end{array} + \begin{array}{c} \bullet \\ \bullet \\ \bullet \\ \bullet \\ 6 \end{array} =$$

$$\begin{array}{c} \bullet \\ 1 \end{array} + \begin{array}{c} \bullet \\ \bullet \\ \bullet \\ \bullet \\ \bullet \\ 7 \end{array} =$$

$$\begin{array}{c} \bullet \\ 1 \end{array} + \begin{array}{c} \bullet \\ \bullet \\ \bullet \\ \bullet \\ \bullet \\ \bullet \\ 8 \end{array} =$$

$$\begin{array}{c} \bullet \\ 1 \end{array} + \begin{array}{c} \bullet \\ \bullet \\ \bullet \\ \bullet \\ \bullet \\ \bullet \\ \bullet \\ 9 \end{array} =$$



Number Sense and Numeration

Appendix 15 s

$$\begin{array}{c} \cdot \\ \cdot \\ 2 \end{array} + 0 =$$

$$\begin{array}{c} \cdot \\ \cdot \\ 2 \end{array} + \begin{array}{c} \cdot \\ 1 \end{array} =$$

$$\begin{array}{c} \cdot \\ \cdot \\ 2 \end{array} + \begin{array}{c} \cdot \\ \cdot \\ 2 \end{array} =$$

$$\begin{array}{c} \cdot \\ \cdot \\ 2 \end{array} + \begin{array}{c} \cdot \\ \cdot \\ \cdot \\ 3 \end{array} =$$

$$\begin{array}{c} \cdot \\ \cdot \\ 2 \end{array} + \begin{array}{c} \cdot \\ \cdot \\ \cdot \\ \cdot \\ 4 \end{array} =$$

$$\begin{array}{c} \cdot \\ \cdot \\ 2 \end{array} + \begin{array}{c} \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ 5 \end{array} =$$


$$\begin{array}{c} \cdot \\ \cdot \\ 2 \end{array} + \begin{array}{c} \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ 6 \end{array} =$$



$$\begin{array}{c} \cdot \\ \cdot \\ 2 \end{array} + \begin{array}{c} \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ 7 \end{array} =$$



$$\begin{array}{c} \cdot \\ \cdot \\ 2 \end{array} + \begin{array}{c} \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ 8 \end{array} =$$



$$0 + \begin{array}{c} \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ \cdot \\ 10 \end{array} =$$

Appendix 15 t

 $3 + 0 =$


 $3 + 1 =$

 $3 + 2 =$


 $3 + 3 =$


 $3 + 4 =$

 $3 + 5 =$

 $3 + 6 =$

 $3 + 7 =$

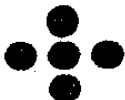
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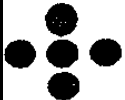
 $4 + 1 =$







Number Sense and Numeration

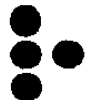
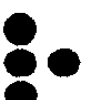
Appendix 15 u

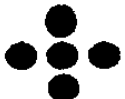

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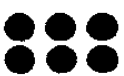

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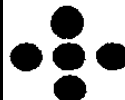
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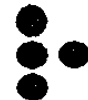
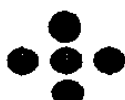
 $4 + 4 =$

 $4 + 5 =$

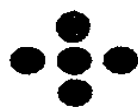
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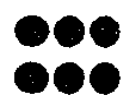
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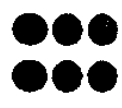
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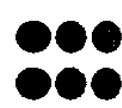
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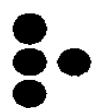
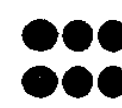
Appendix 15 v

 $5 + 5 =$

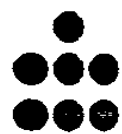
 $6 + 0 =$


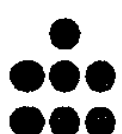
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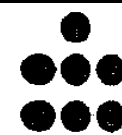
 $6 + 3 =$



 $6 + 4 =$

 $6 + 1 =$

 $7 + 0 =$

 $7 + 2 =$

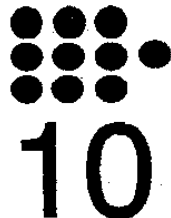
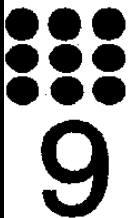
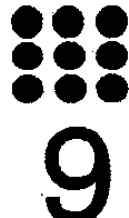
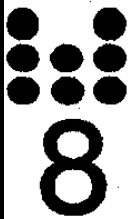
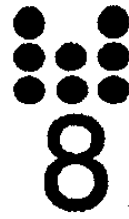
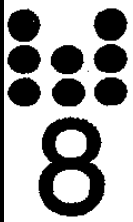
 $7 + 3 =$

 $7 + 1 =$



Number Sense and Numeration

Appendix 15 w



The Ontario Curriculum: Mathematics

Challenge P9

T

A Sweet Problem

Expectations

- 1m24** use ordinal numbers to tenth;
- 1m28** identify the effect of zero in addition and subtraction;
- 1m33** describe their thinking as they solve problems.
- 1m34** - pose and solve simple number problems orally (e.g., how many students wore boots today)
- 1m35** - use concrete materials to help in solving simple number problems;
- 1m36** - describe their thinking as they solve problems.

Teaching Strategies

1. Review money terms: penny - 1¢, nickel - 5¢, dime - 10¢.
2. Problem solving activity: Your teacher has given you 10¢ (in play money) as a reward for cleaning the playground. You can spend this money on a variety of candy. Decide which kind of candy you will buy with this money.
3. Explore all of the different ways to represent 10¢ using play money.
4. Have students solve the problem, using pictures, numbers and words. Cut and paste to show what they will buy and record it on the sheet.
5. Have students solve similar subtraction problems.

Suggested Resources

- ♦ play money to 10¢ including pennies, dimes and nickels
- ♦ worksheet (*Appendix 16a and 16b*)
- ♦ clip art of candy to cut and paste, *Appendix 16c*
- ♦ **School Vista**, *Money*, IBM software

Catholic School Commentary

- (3) *A reflective, creative and holistic thinker* who solves problems and makes responsible decisions with an informed moral conscience for the common good. (c) Thinks reflectively and creatively to evaluate situations and solve problems.
 - (4) *A self-directed, responsible, lifelong learner* who develops and demonstrates their God-given potential. (f) Applies effective communication, decision-making, problem-solving, time and resource management skills.
- ♦ **Matthew 25: 14-30** *Parable of the three servants*

Assessment

- ♦ Does the student successfully find a solution to the problem?
- ♦ Can he/she demonstrate it in a different way?
- ♦ Did the student show the answer in numbers, pictures and words?



Number Sense and Numeration

Challenge P9

S

A Sweet Problem

Materials

- ◆ candy clip art, *Appendix 16c*
- ◆ glue
- ◆ pencil
- ◆ play money including penny, nickel and dime
- ◆ scissors
- ◆ worksheet (*Appendix 16a and 16b*)

Procedures

1. Solve the following problem:
Your teacher has given you 10¢ as a reward for cleaning the playground. You can spend this money on a variety of candy. Decide which kind of candy you will buy with your money.
2. Cut and paste, on the recording sheet, the kinds of candy which you would buy.

Further Challenges

- ◆ What candy could you buy with 15¢? Cut and paste, on the back of your worksheet, the candy which you would buy.
- ◆ What would be the largest amount candy you could buy with this money?

Appendix 16 a

A Sweet Problem: Problem A

Name: _____

1. Circle 10¢ in each box below. Do not use the same combination of numbers twice.

①	①	①	①	⑤	⑩	⑤	①	⑩
①	①	①	①	①	①	①	①	⑤
⑤	⑤	⑤	⑤	⑩	①	⑩	⑤	①
⑩	⑩	⑩	①	①	①	①	①	⑤

2. Show the answer to the problem presented on page 103, in two different ways. Paste below the pictures of the candy, from *Appendix 16c*, which you would buy.

A
B



Number Sense and Numeration

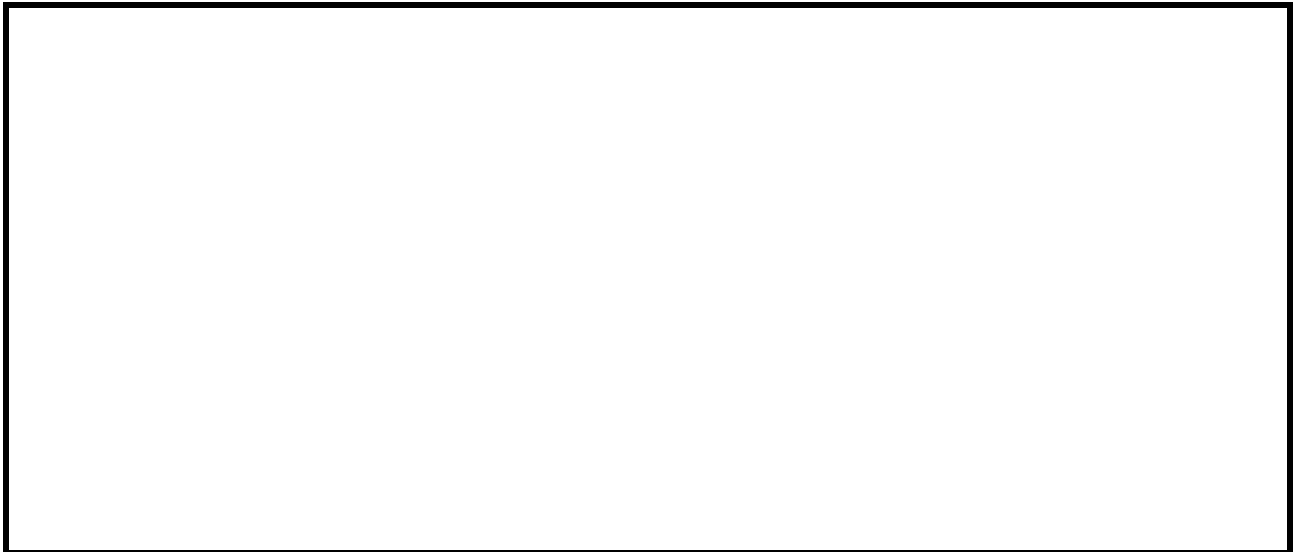
Appendix 16 b

Name: _____

1. You have 10¢ in your pocket. You wish to buy a pencil. It costs 7¢. How much will you have left? Use numbers, pictures and words to show how you solved this problem. Check your answer with a calculator.

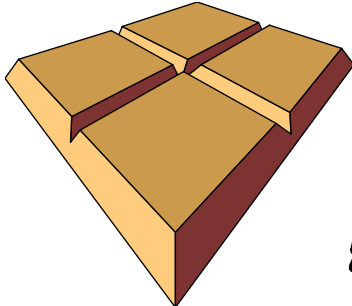


2. You have a dime. You want to buy an eraser for 3¢ and a small ruler which costs a nickel. How much change will you get back? Use numbers, pictures and words to show how you solved this problem. Check your answer with a calculator.



Appendix 16 b

Candy Cutout



10¢



1¢



2¢



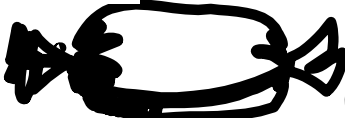
5¢



1¢



3¢



2¢



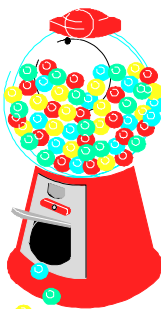
1¢



2¢



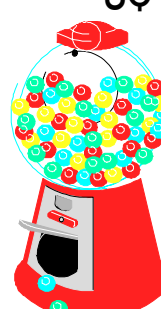
1¢



5¢



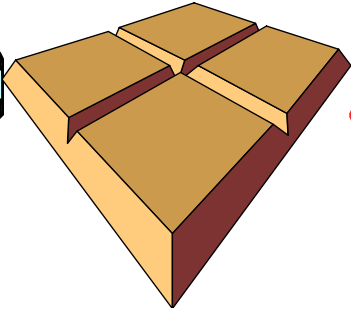
2¢



5¢



3¢



10¢



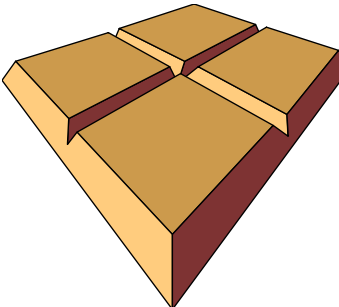
1¢



1¢



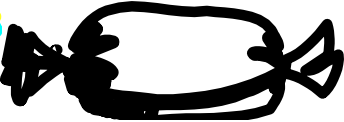
1¢



10¢



5¢



2¢



3¢



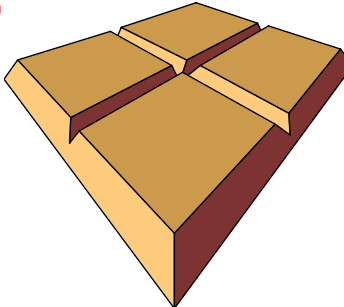
5¢



2¢



1¢



10¢



1¢



2¢



1¢



Number Sense and Numeration