Quizzes and Tests: Grade 4—Alberta

JUMP Math 4.2

Contents

Unit 8  Probability and Data Management: Graphs

<table>
<thead>
<tr>
<th>Name</th>
<th>Lessons</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quiz</td>
<td>Lessons PDM4-1 to 5</td>
<td>1</td>
</tr>
<tr>
<td>Test</td>
<td>Lessons PDM4-1 to 5</td>
<td>4</td>
</tr>
</tbody>
</table>

Unit 9  Number Sense: Fractions

<table>
<thead>
<tr>
<th>Name</th>
<th>Lessons</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quiz</td>
<td>Lessons NS4-45, 46</td>
<td>7</td>
</tr>
<tr>
<td>Quiz</td>
<td>Lessons NS4-48, 49, 51</td>
<td>9</td>
</tr>
<tr>
<td>Test</td>
<td>Lessons NS4-45, 46, 48, 49, 51</td>
<td>12</td>
</tr>
</tbody>
</table>

Unit 10  Number Sense: Decimals

<table>
<thead>
<tr>
<th>Name</th>
<th>Lessons</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quiz</td>
<td>Lessons NS4-52 to 54</td>
<td>15</td>
</tr>
<tr>
<td>Quiz</td>
<td>Lessons NS4-56 to 59</td>
<td>18</td>
</tr>
<tr>
<td>Quiz</td>
<td>Lessons NS4-60 to 63</td>
<td>21</td>
</tr>
<tr>
<td>Test</td>
<td>Lessons NS4-52 to 54, 56 to 63</td>
<td>24</td>
</tr>
</tbody>
</table>

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### Unit 11  Patterns and Algebra: Equations

<table>
<thead>
<tr>
<th>Name</th>
<th>Lessons</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quiz</td>
<td>Lessons PA4-12 to 15</td>
<td>27</td>
</tr>
<tr>
<td>Quiz</td>
<td>Lessons PA4-16 to 18</td>
<td>29</td>
</tr>
<tr>
<td>Test</td>
<td>Lessons PA4-12 to 18</td>
<td>31</td>
</tr>
</tbody>
</table>

### Unit 12  Measurement: 2-D Shapes

<table>
<thead>
<tr>
<th>Name</th>
<th>Lessons</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quiz</td>
<td>Lessons ME4-13 to 16</td>
<td>34</td>
</tr>
<tr>
<td>Test</td>
<td>Lessons ME4-13 to 16</td>
<td>36</td>
</tr>
</tbody>
</table>

### Unit 13  Measurement: Time

<table>
<thead>
<tr>
<th>Name</th>
<th>Lessons</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quiz</td>
<td>Lessons ME4-21 to 23</td>
<td>39</td>
</tr>
<tr>
<td>Quiz</td>
<td>Lessons ME4-24, 25, 28</td>
<td>41</td>
</tr>
<tr>
<td>Test</td>
<td>Lessons ME4-21 to 25, 28</td>
<td>43</td>
</tr>
</tbody>
</table>

### Unit 14  Geometry: 3-D Shapes

<table>
<thead>
<tr>
<th>Name</th>
<th>Lessons</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quiz</td>
<td>Lessons G4-10 to 12</td>
<td>46</td>
</tr>
<tr>
<td>Test</td>
<td>Lessons G4-10 to 12</td>
<td>48</td>
</tr>
</tbody>
</table>

### Unit 15  Probability and Data Management: Probability

The lessons in this unit are optional for the Alberta curriculum, so quizzes and tests are not provided.
Introduction to Quizzes and Tests

We provide a quiz for, on average, every four lessons and a test covering the material of two to three quizzes, with one or two tests per unit. Students should need no more than 10 minutes to complete a quiz and no more than 45 minutes to complete a test.

Quizzes cover material both from lessons that are required to cover the curriculum and lessons labelled as recommended, while tests only cover material from lessons that are required to cover the curriculum.

Quizzes can be used as confidence builders and as formative assessment tools. A quiz should be administered after the last lesson that it covers has been taught. Tests are intended to be used as summative assessment tools. We recommend allowing students time to receive and internalize the feedback from all relevant quizzes before administering the test. The introduction to each unit in the Teacher Resource identifies which lessons are covered by each quiz and test.
Unit 8: Probability and Data Management

Quiz (Lessons 1–5) — AB

1. Are all possible responses given? If not, add an “other” category.
   
a) What is your favourite colour?
   - [ ] red
   - [ ] yellow
   - [ ] blue

   b) Which of these flavours do you like best?
   - [ ] vanilla
   - [ ] chocolate
   - [ ] strawberry

2. The first row shows what ☺ means. What does ☻ mean? Fill in the table.

<table>
<thead>
<tr>
<th>☻</th>
<th>2</th>
<th>8</th>
<th>10</th>
<th>50</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>☾</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. a) Use the pictograph to fill in the table.

<table>
<thead>
<tr>
<th>Birds Seen</th>
<th>☾ = 4 birds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jays</td>
<td>☾ ☾ ☾ ☾</td>
</tr>
<tr>
<td>Robins</td>
<td>☾ ☾</td>
</tr>
<tr>
<td>Finches</td>
<td>☾</td>
</tr>
<tr>
<td>Sparrows</td>
<td>☾ ☾ ☾ ☾ ☾ ☾ ☾</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Bird</th>
<th>Number Seen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jays</td>
<td></td>
</tr>
<tr>
<td>Robins</td>
<td></td>
</tr>
<tr>
<td>Finches</td>
<td></td>
</tr>
<tr>
<td>Sparrows</td>
<td></td>
</tr>
</tbody>
</table>

b) How many birds were seen in total? _________

c) How many times as many jays as finches were seen? _________

BONUS ► Make up your own question from the pictograph. Write the answer.

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
4. Tasha surveyed her grade about their favourite type of movie and gave four choices.
   a) Here are the results of Tasha’s survey. Tally the data.

   ![Tally Marks]

   Action: ________
   Drama:  ________
   Comedy: ________
   Romance: _______

   b) Fill in the title and axis labels on the bar graph.

   c) Count by 4s to fill in the numbers on the axis.

   d) Complete the bar graph.

   Title: _________________________________________________________
Unit 8: Probability and Data Management

Quiz (Lessons 1–5) — AB

1. a) Add “other.”
   b) Do not add “other.”
2. 1, 4, 5, 25, 50
3. a) 12
   8
   4
   24
   b) 48
   c) 3
   BONUS
   Answers will vary.
   Teacher to check.
4. a) 22
   8
   24
   6
   b) Teacher to check.
   c) 4, 8, 12, 16, 20,
      24, 28
   d) Teacher to check.
1. The first row shows what ☺ means. What does ☺ mean? Fill in the table.

<table>
<thead>
<tr>
<th>☺</th>
<th>4</th>
<th>6</th>
<th>20</th>
<th>30</th>
<th>400</th>
</tr>
</thead>
<tbody>
<tr>
<td>☺</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. a) Use the pictograph to fill in the table.

**Birds Seen**

<table>
<thead>
<tr>
<th></th>
<th>⚫ = 10 birds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jays</td>
<td>⚫ ⚫ ⚫</td>
</tr>
<tr>
<td>Robins</td>
<td>⚫ ⚫</td>
</tr>
<tr>
<td>Finches</td>
<td>⚫</td>
</tr>
<tr>
<td>Sparrows</td>
<td>⚫ ⚫ ⚫ ⚫ ⚫ ⚫</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Bird</th>
<th>Number Seen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jays</td>
<td></td>
</tr>
<tr>
<td>Robins</td>
<td></td>
</tr>
<tr>
<td>Finches</td>
<td></td>
</tr>
<tr>
<td>Sparrows</td>
<td></td>
</tr>
</tbody>
</table>

b) How many birds were seen in total? __________

c) How many times as many sparrows as finches were seen? __________
3. Kyle surveyed his grade about their favourite type of movie and gave four choices.
   a) Here are the results of Kyle’s survey. Tally the data.

   Action: 
   Drama: 
   Comedy: 
   Romance: 

   b) Fill in the title and axis labels on the bar graph.

   c) Count by 10s to fill in the numbers on the axis.

   d) Complete the bar graph.

   Title: ________________________________________________________
Unit 8: Probability and Data Management

Test (Lessons 1–5) — AB

1. 2, 3, 10, 15, 200

2. a) 30
   20
   5
   60
   b) 115
   c) 12

3. a) 30
   15
   35
   10
   b) Teacher to check.
   c) 10, 20, 30, 40, 50, 60, 70
   d) Teacher to check.
1. Write the fraction shown by the shaded part of the image.
   a) ____________________
   b) ____________________

2. Shade half of the figure. Write two fractions to describe the shaded part.
   a) ____________________ = ____________________
   b) ____________________ = ____________________

3. How many shaded parts does the fraction show? How many parts are not shaded?
   a) _______ shaded _______ not shaded
   b) _______ shaded _______ not shaded

4. A fraction is equal to 0 if its numerator is _____.

5. Shade two different fractions between 0 and \( \frac{1}{2} \), and then write the fractions.
   This fraction is ____________________.
   This fraction is ____________________.
Unit 9: Number Sense

Quiz (Lessons 45, 46) — AB

1. a) \( \frac{3}{4} \)
   b) \( \frac{6}{10} \)

2. Teacher to check shading.
   a) \( \frac{1}{2} = \frac{2}{4} \)
   b) \( \frac{1}{2} = \frac{3}{6} \)

3. a) 7
   b) 3

4. 0

5. Teacher to check shading.
   Fractions could be
   \( \frac{1}{8} \) or \( \frac{1}{4} \)
1. Circle the greater fraction.

   a) \[\frac{4}{7}\] or \[\frac{6}{7}\]  
   b) \[\frac{3}{10}\] or \[\frac{1}{10}\]  
   c) \[\frac{4}{5}\] or \[\frac{4}{10}\]  
   d) \[\frac{22}{35}\] or \[\frac{22}{23}\]

2. Two fractions have the same denominator but different numerators. How can you tell which fraction is greater?

3. Order the fractions from least to greatest by considering the numerators and denominators.

   a) \[\frac{8}{10}\] \[\frac{3}{10}\] \[\frac{1}{10}\] \[\frac{5}{10}\] \[\frac{2}{10}\]
   b) \[\frac{6}{17}\] \[\frac{6}{8}\] \[\frac{6}{25}\] \[\frac{6}{6}\] \[\frac{6}{138}\]

4. a) Write the fractions in the correct category.

   \[\frac{7}{8}\] \[\frac{1}{8}\] \[\frac{2}{5}\] \[\frac{2}{3}\]

   \begin{tabular}{|c|c|}
   \hline
   0 to \[\frac{1}{2}\] & \[\frac{1}{2}\] to 1 \hline
   \end{tabular}

   b) Use the results from part a) to write < or > in the box between the pair of fractions.

   i) \[\frac{2}{3}\] \[\frac{2}{5}\]  
   ii) \[\frac{1}{6}\] \[\frac{7}{8}\]  
   iii) \[\frac{2}{3}\] \[\frac{1}{6}\]  
   iv) \[\frac{2}{5}\] \[\frac{7}{8}\]
Unit 9: Number Sense

Quiz (Lessons 48, 49, 51) — AB

5. Draw a picture that fits all the clues.

   a) There are 6 circles and squares.
      \[
      \frac{2}{6} \text{ of the figures have four sides.}
      \frac{4}{6} \text{ of the figures are shaded.}
      \[
   
   b) There are 5 squares and triangles.
      \[
      \frac{3}{5} \text{ of the figures have four sides.}
      \frac{2}{5} \text{ of the figures are shaded.}
      \]
Unit 9: Number Sense

Quiz (Lessons 48, 49, 51) — AB

1. Circle the following:
   a) $\frac{6}{7}$  
   b) $\frac{3}{10}$  
   c) $\frac{4}{5}$  
   d) $\frac{22}{23}$

2. If two fractions have the same denominator, the fraction with the larger numerator is greater.

3. a) $\frac{1}{10}, \frac{2}{10}, \frac{3}{10}, \frac{5}{10}$, $\frac{8}{10}$
   b) $\frac{6}{138}, \frac{6}{25}, \frac{6}{17}, \frac{6}{8}, \frac{6}{6}$

4. a) $\begin{array}{|c|c|} \hline \text{0 to } \frac{1}{2} & \text{\frac{1}{2} to 1} \rule{0pt}{2ex} \\ \hline \frac{1}{6}, \frac{2}{5}, \frac{7}{8}, \frac{2}{3} \rule{0pt}{2ex} \\ \hline \end{array}$
   b) i) $>$  
   ii) $<$  
   iii) $>$  
   iv) $<$

5. Sample answers:
   a) □□□□□□
   b) △△□□□□
1. Shade the fraction.
   a) \(\frac{4}{6}\)  
   b) \(\frac{3}{9}\)  
   c) \(\frac{5}{8}\)

2. Dory, Jessica, and Rayder each brought 1 cake to school for their year-end class party. None of the cakes are the same size. The teacher cut each cake into 8 equal pieces, so everyone in the class can have a piece. Dory says, “That’s not fair at all!” and Rayder says, “That’s perfectly fair!”
   a) Why does Dory think it’s unfair?
      
   b) Why does Rayder think it’s fair?
      
3. Write > or <.
   a) \(\frac{3}{7}\) \(\frac{1}{2}\)  
   b) \(\frac{1}{2}\) \(\frac{5}{9}\)  
   c) \(\frac{9}{16}\) \(\frac{1}{2}\)

4. Circle the greater fraction.
   a) \(\frac{3}{5}\) or \(\frac{5}{5}\)  
   b) \(\frac{4}{16}\) or \(\frac{4}{17}\)  
   c) \(\frac{9}{11}\) or \(\frac{1}{3}\)

5. Order the fractions from greatest to least by considering the numerators and denominators.
   a) \(\frac{34}{117}\) \(\frac{101}{117}\) \(\frac{17}{117}\) \(\frac{2}{117}\) \(\frac{60}{117}\)  
   b) \(\frac{9}{26}\) \(\frac{9}{12}\) \(\frac{9}{14}\) \(\frac{9}{65}\) \(\frac{9}{31}\)
6. A jar contains 7 red marbles, 3 yellow marbles, and 5 blue marbles. What fraction of the marbles are not blue? You can make a picture to help.

7. Write four fraction statements for the picture: \[ \bigcirc \bigtriangleup \bigcirc \bigtriangleup \bigcirc \square \bigcirc \]
Unit 9: Number Sense

Test (Lessons 45, 46, 48, 49, 51) — AB

1. Teacher to check that the following number of parts is shaded:
   a) four
   b) three
   c) five

2. a) Dory thinks this is unfair because \( \frac{1}{8} \) of a smaller cake will be a smaller piece than \( \frac{1}{8} \) of a larger cake.
   b) Rayder thinks it is fair because all of the cakes will be split into the same number of pieces.

3. a) <
   b) <
   c) >

4. Circle the following:
   a) \( \frac{5}{5} \)
   b) \( \frac{4}{16} \)
   c) \( \frac{9}{11} \)

5. a) \( \frac{101}{117} \), \( \frac{60}{117} \), \( \frac{34}{117} \), \( \frac{17}{2} \), \( \frac{2}{117} \)
   b) \( \frac{9}{12} \), \( \frac{9}{14} \), \( \frac{9}{26} \), \( \frac{9}{31} \), \( \frac{9}{65} \)

6. \( \frac{10}{15} \)

7. Answers will vary.
   Sample answers:
   \( \frac{3}{7} \) are triangles, \( \frac{3}{7} \) are circles, \( \frac{1}{7} \) is a rectangle, \( \frac{4}{7} \) are shaded.
1. Write a fraction and a decimal for the shaded part in the boxes.
   a)  
   b)  
   c)  

2. Show the decimal on the number line with an X.
   a) 0.7 of the distance from 0.0 to 1.0  
   b) 0.3 of the distance from 0.0 to 1.0

3. Write the number into the place value chart.
<table>
<thead>
<tr>
<th>Thousands</th>
<th>Hundreds</th>
<th>Tens</th>
<th>Ones</th>
<th>Tenths</th>
</tr>
</thead>
</table>
   a) 2033.4
   b) 0.6
   c) 6.3
   d) 892.7

4. a) Write a fraction in each blank above the number line.
    b) Write a decimal in each blank below the number line.

   0
   10

   0.0

   c) Which decimal is equal to the fraction?

   i) \( \frac{6}{10} = \)  
   ii) \( \frac{2}{10} = \)  
   iii) \( \frac{10}{10} = \)  
   iv) \( \frac{5}{10} = \)  

5. Write the equivalent words.
   a) 8.3 =__________________________
   b) 11.9 =__________________________
6. Count the shaded tenths. Write the amount two ways.

a)  

____ tenths = _____

b)  

____ tenths = _____
Unit 10: Number Sense

Quiz (Lessons 52–54) — AB

1. a) \( \frac{6}{10} \), 0.6
   b) \( \frac{5}{10} \), 0.5
   c) \( \frac{7}{10} \), 0.7

2. a) [Diagram]
   b) [Diagram]

3. Th H T O T
   a) 2 0 3 3 4
   b) 0 6
   c) 6 3
   d) 8 9 2 7

4. a) \( \frac{1}{10} \), \( \frac{2}{10} \), \( \frac{3}{10} \), \( \frac{4}{10} \), \( \frac{5}{10} \), \( \frac{6}{10} \), \( \frac{7}{10} \), \( \frac{8}{10} \), \( \frac{9}{10} \), \( \frac{1}{10} \)
   b) 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0
   c) i) 0.6
      ii) 0.2
      iii) 1.0
      iv) 0.5

5. a) eight and three tenths
   b) eleven and nine tenths

6. a) 26, 2.6
   b) 74, 7.4
Unit 10: Number Sense

Quiz (Lessons 56–59) — AB

Name: ______________________

Date: ________________

1. Add the decimals by lining up the decimal points. You will need to regroup.
   a) 62.8 + 9.3
   b) 70.8 + 19.4
   c) 7.4 + 36.5 + 28.6

2. Subtract the decimals by lining up the decimal points. You will need to regroup.
   a) 53.7 − 8.9
   b) 18.2 − 12.8
   c) 70.4 − 15.6

3. Circle the correct answer.
   a) 17.3 is closer to:   17.0   or   18.0
   b) 9.6 is closer to:   9.0   or   10.0
   c) 57.1 is closer to:   57.0   or   58.0
   d) 0.7 is closer to:   0.0   or   1.0

4. Shade the same amount in the second square. Then count by 10s to write the number of hundredths.
   a) 4/10 = __________ 100
   b) 8/10 = __________ 100
5. Shade the fraction.
   a) \( \frac{52}{100} \)  
   b) \( \frac{4}{10} \)  
   c) 11 hundredths  
   d) 9 tenths

6. Write a fraction for the shaded part of the hundreds block. Then write the fraction as a decimal. Hint: Count by 10s for each column or row that is shaded.
   a)  
   b)  
   BONUS ➤
Unit 10: Number Sense
Quiz (Lessons 56–59) — AB

1. a)  
\[
\begin{array}{c}
6 & 2 & 8 \\
9 & 3 \\
7 & 2 & 1 \\
\end{array}
\]
\[+ \quad \begin{array}{c}
1 & 1 \\
1 & 9 & 4 \\
9 & 0 & 2 \\
\end{array}
\]
\[= \quad \begin{array}{c}
7 & 2 & 1 \\
\end{array}
\]
b)  
\[
\begin{array}{c}
7 & 0 & 8 \\
\end{array}
\]
\[+ \quad \begin{array}{c}
1 & 9 & 4 \\
9 & 0 & 2 \\
\end{array}
\]
\[= \quad \begin{array}{c}
9 & 0 & 2 \\
\end{array}
\]
c)  
\[
\begin{array}{c}
2 & 1 \\
\end{array}
\]
\[+ \quad \begin{array}{c}
7 & 4 \\
3 & 6 & 5 \\
2 & 8 & 6 \\
\end{array}
\]
\[= \quad \begin{array}{c}
7 & 2 & 5 \\
\end{array}
\]

2. a)  
\[
\begin{array}{c}
4 & 2 & 1 \\
\end{array}
\]
\[\begin{array}{c}
7 & 4 \\
8 & 9 \\
4 & 4 & 8 \\
\end{array}
\]
\[= \quad \begin{array}{c}
3 & 8 & 8 \\
\end{array}
\]
b)  
\[
\begin{array}{c}
1 & 8 & 2 \\
\end{array}
\]
\[\begin{array}{c}
1 & 2 & 8 \\
5 & 4 \\
\end{array}
\]
\[= \quad \begin{array}{c}
5 & 4 \\
\end{array}
\]
c)  
\[
\begin{array}{c}
6 & 9 & 1 \\
\end{array}
\]
\[\begin{array}{c}
\not{7} & \not{2} \\
1 & 5 & 6 \\
5 & 4 & 8 \\
\end{array}
\]
\[= \quad \begin{array}{c}
5 & 4 \\
\end{array}
\]

3. Circle the following:
   a) 17.0
   b) 10.0
   c) 57.0
   d) 1.0

4. a)  
\[
\begin{array}{c}
4 & 0 \\
\end{array}
\]
\[= \quad \begin{array}{c}
40 \\
\end{array}
\]
b)  
\[
\begin{array}{c}
8 & 0 \\
\end{array}
\]
\[= \quad \begin{array}{c}
80 \\
\end{array}
\]

5. a)  
\[
\begin{array}{c}
\not{6} & \not{0} \\
\not{6} & \not{0} \\
\not{6} & \not{0} \\
\end{array}
\]
\[= \quad \begin{array}{c}
0.6 \\
\end{array}
\]
b)  
\[
\begin{array}{c}
4 & 4 \\
\end{array}
\]
\[= \quad \begin{array}{c}
0.44 \\
\end{array}
\]

BONUS
\[
\begin{array}{c}
8 & 8 \\
\end{array}
\]
\[= \quad \begin{array}{c}
0.88 \\
\end{array}
\]

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1. Describe the shaded parts in two ways.
   a) [Image]
   _____ = _____ ones _____ tenths _____ hundredths
   b) [Image]
   _____ = _____ ones _____ tenths _____ hundredths

2. Write the number in expanded form.
   a) 4.67 = _____ + _____ + _____
   b) 35.29 = _____ + _____ + _____ + _____

3. Regroup so that each place value has a single digit.
   a) 4 ones + 16 tenths + 14 hundredths = _____ ones + _____ tenths + _____ hundredths
   b) 15 tenths + 37 hundredths = _____ one + _____ tenths + _____ hundredths

4. Add by lining up the decimal points. You may need to regroup more than once.
   a) 16.82 + 34.09
   b) 28.97 + 5.35

5. Subtract by lining up the decimal points. You may need to regroup more than once.
   a) 62.37 − 3.28
   b) 25.03 − 16.44
6. Complete the table.

<table>
<thead>
<tr>
<th>Amount in ¢</th>
<th>Dollars</th>
<th>Dimes</th>
<th>Cents</th>
<th>Amount in $</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) 328¢</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) 7¢</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) 68¢</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. You need to pay the given amount. You have a 10-dollar bill. Find the difference owed.

\[
\text{Difference owed} = 10.00 - 1.70 = \underline{8.30} \]
Unit 10: Number Sense
Quiz (Lessons 60–63) — AB

1. a) 2.46, 2, 4, 6
   b) 4.36, 4, 3, 6

2. a) 4, 0.6, 0.07
   b) 30, 5, 0.2, 0.09

3. a) 5, 7, 4
   b) 1, 8, 7

4. a)

   \[
   \begin{array}{c}
   1 \\
   1 \\
   1 \\
   + \\
   1 \\
   6 \\
   8 \\
   2 \\
   \hline
   3 \\
   4 \\
   0 \\
   9 \\
   \hline
   5 \\
   0 \\
   9 \\
   1 \\
   \end{array}
   \]

   b)

   \[
   \begin{array}{c}
   1 \\
   1 \\
   + \\
   2 \\
   8 \\
   9 \\
   7 \\
   \hline
   5 \\
   3 \\
   5 \\
   \hline
   3 \\
   4 \\
   3 \\
   2 \\
   \end{array}
   \]

5. a)

   \[
   \begin{array}{c}
   5 \\
   1 \\
   2 \\
   1 \\
   \hline
   2 \\
   2 \\
   7 \\
   \hline
   3 \\
   2 \\
   8 \\
   \hline
   5 \\
   9 \\
   0 \\
   9 \\
   \end{array}
   \]

   b)

   \[
   \begin{array}{c}
   1 \\
   4 \\
   9 \\
   1 \\
   \hline
   2 \\
   4 \\
   3 \\
   \hline
   1 \\
   6 \\
   4 \\
   4 \\
   \hline
   8 \\
   5 \\
   9 \\
   \end{array}
   \]

6. a) 3, 2, 8, $3.28
   b) 0, 0, 7, $0.07
   c) 0, 6, 8, $0.68

7. 30¢, $2.00, $8.00, $8.30
Unit 10: Number Sense

Test (Lessons 52–54, 56–63) — AB

1. What value does the digit 6 have in the number?
   a) 7625.1   b) 0.6   c) 960.5

2. a) Write a decimal in each blank below the number line.

   \[
   \begin{array}{ccccccc}
   0 & 1 & 2 & 3 & 4 & 5 & 5 \\
   0 & 5 & 5 & 5 & 5 & 5 & 5 \\
   \end{array}
   \]

   0.0  ____  ____  ____  ____  ____  ____  ____  ____  ____  ____

   b) Write the decimal that the fraction is equal to.
      i) \( \frac{5}{5} = \) _____
      ii) \( \frac{2}{5} = \) _____
      iii) \( \frac{4}{5} = \) _____
      iv) \( \frac{0}{5} = \) _____

3. Write a decimal in each blank below the number line.

   29.3 29.4  ____  ____  ____  ____  ____  ____  ____  ____  30.3

4. Subtract the decimals by lining up the decimal points.
   a) 67.1 − 8.23

   \[
   \begin{array}{|c|c|}
   \hline
   \bullet & \bullet \\
   \hline
   \bullet & \bullet \\
   \hline
   \end{array}
   \]

   b) 10.41 − 9.5

   \[
   \begin{array}{|c|c|}
   \hline
   \bullet & \bullet \\
   \hline
   \bullet & \bullet \\
   \hline
   \end{array}
   \]

5. Shade the fraction.
   a) 47 hundredths

   \[
   \begin{array}{|c|c|}
   \hline
   \bullet & \bullet \\
   \hline
   \bullet & \bullet \\
   \hline
   \end{array}
   \]

   b) \( \frac{3}{10} \)
6. You need to pay the given amount. You have a 10-dollar bill. Find the difference owed.

\[ \text{Difference owed} = \text{\\$10.00 - \$1.10} = \text{\\$8.90} \]

7. You need to pay the given amount. You have a 20-dollar bill. Find the difference owed.

\[ \text{Difference owed} = \text{\\$20.00 - \$12.40} = \text{\\$7.60} \]
1. a) 600  
   b) 6  
   c) 60  
2. a) 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0  
   b) i) 1.0  
      ii) 0.4  
      iii) 0.8  
      iv) 0.0  
3. 29.5, 29.6, 29.7, 29.8, 29.9, 30.0, 30.1, 30.2  
4. a)  
    \[ \begin{array}{ccc} 
    5 & 16 & 10 \\
    8 & 2 & 3 \\
    5 & 8 & 8 & 7 \\
    \end{array} \]  
   b)  
    \[ \begin{array}{ccc} 
    0 & 9 & 1 \\
    9 & 5 & 0 \\
    0 & 9 & 1 \\
    \end{array} \]  
5. a)  
    \[ \begin{array}{ccc} 
    \times & \times & \times \\
    \times & \times & \times \\
    \times & \times & \times \\
    \end{array} \]  
   b)  
6. 90¢, $2.00, $8.00, $8.90  
7. 60¢, $13.00, $7.00, $7.60
1. Draw the missing marbles in the box. Then write the missing number in the smaller box.

   a) \[
   \begin{array}{c}
   \text{○ ○ ○} \\
   \text{●} \\
   \end{array}
   + \quad \begin{array}{c}
   \text{●} \\
   \end{array}
   = \quad \begin{array}{c}
   \text{○ ○ ○ ○ ○ ○ ○ ○ ○} \\
   \end{array}
   \]

   b) \[
   \begin{array}{c}
   \text{○ ○ ○} \\
   \text{●} \\
   \end{array}
   = \quad \begin{array}{c}
   \text{●} \\
   \end{array}
   - \quad \begin{array}{c}
   \text{○ ○ ○} \\
   \end{array}
   \]

   \[
   \begin{array}{c}
   5 \\
   + \quad \text{●} \\
   = \quad 8 \\
   \end{array}
   \]

   \[
   \begin{array}{c}
   4 \\
   = \quad \text{●} \\
   - \quad 3 \\
   \end{array}
   \]

2. Rewrite the multiplication as division, then solve the equation.

   a) \[\begin{array}{c}
   \text{●} \\
   \times 3 = 15 \\
   \end{array}\]

   b) \[50 = 2 \times \begin{array}{c}
   \text{●} \\
   \end{array}\]

   c) \[\begin{array}{c}
   \text{●} \\
   \times 21 = 84 \\
   \end{array}\]

3. Write three equations for the table.

   a) \[
   \begin{array}{c|c}
   m & 18 \\
   \hline
   11 & \text{●} \\
   \end{array}
   \]

   b) \[
   \begin{array}{c|c|c}
   v & 6 & 23 \\
   \end{array}
   \]

   c) \[
   \begin{array}{c|c|c}
   \text{●} & 10 & k \\
   \hline
   \end{array}
   \]

4. Fill in the table. Write x for the number you are not given. Circle the part that is larger. Write an equation where the unknown is by itself.

<table>
<thead>
<tr>
<th>Parts</th>
<th>Difference</th>
<th>Equation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cats</td>
<td>Dogs</td>
<td></td>
</tr>
<tr>
<td>a) 5 dogs; 3 more cats than dogs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) 6 cats; 2 fewer cats than dogs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) 14 dogs; 11 more dogs than cats</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   **BONUS**

   | 17 cats; 8 fewer dogs than cats |          |          |
Unit 11: Patterns and Algebra

Quiz (Lessons 12–15) — AB

1. a)  
   b)  

2. a)  
   b)  
   c)  

3. a)  
   b)  
   c)  

4. a)  
   b)  
   c)  

BONUS  

Answer Key
1. Fill in the table. Write \( x \) for the number you need to find. Cross out the information you do not use.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Parts</th>
<th>How Many?</th>
<th>Difference Total</th>
<th>Equation and Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Sean has 5 kg of apples and 6 kg of pears. How much fruit does he have?</td>
<td></td>
<td></td>
<td>Difference: ____</td>
<td>Total: ____</td>
</tr>
<tr>
<td>b) Sandy Beach Camp has 27 red canoes. It has 15 fewer green canoes than red canoes. How many green canoes does the camp have?</td>
<td></td>
<td></td>
<td>Difference: ____</td>
<td>Total: ____</td>
</tr>
</tbody>
</table>

2. Mick can play four times as many songs on the piano as Sara. Mick can play 18 more songs than Sara. How many songs can each person play? Draw the model. Find the size of one block in the model. Then solve the problem.

Mick can play _____ songs and Sara can play _____ songs.

3. Complete the table.

<table>
<thead>
<tr>
<th>Total Number of Things</th>
<th>Number of Sets</th>
<th>Number in Each Set</th>
<th>Multiplication or Division Equation</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) ( x )</td>
<td>5</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>b) 88</td>
<td>4</td>
<td>( x )</td>
<td></td>
</tr>
<tr>
<td>c) 21</td>
<td>( x )</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**BONUS**

<table>
<thead>
<tr>
<th>Total Number of Things</th>
<th>Number of Sets</th>
<th>Number in Each Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>2</td>
<td>( x )</td>
</tr>
</tbody>
</table>
Unit 11: Patterns and Algebra

Quiz (Lessons 16–18) — AB

1. a) apples, 5 kg
   pears, 6 kg
   total: x
   
   \[5 + 6 = x, \ x = 11\]

b) red canoes, 27
   green canoes, x
   difference: 15
   
   \[27 - 15 = x, \ x = 12\]

2. Mick: \[\ \]
   Sara: \[18\]
   24, 6

3. a) \[5 \times 8 = 40\]
       
   b) \[88 \div 4 = 22\]
       
   c) \[21 \div 3 = 7\]
   **BONUS**
   \[1000 \div 2 = 500\]
1. Draw a picture for the equation. Use your picture to solve the equation.
   a) 4 + [ ] = 9
   b) 3 = [ ] − 7

2. Rewrite the multiplication as division, then solve the equation.
   a) [ ] × 4 = 20
   b) 64 = 2 × [ ]
   BONUS ➤ [ ] × 8 = 800

3. Circle the total in the story. Then write an equation and solve it.
   a) 12 green grapes
   16 grapes altogether
   x purple grapes
   b) x green grapes
   14 purple grapes
   22 grapes altogether
   c) 17 green grapes
   19 grapes altogether
   x purple grapes

4. Write an equation where the unknown is by itself. Then solve the equation.
   a) Ella hikes 12 km in the morning. She hikes 3 km less in the afternoon. How many kilometres did she hike in the afternoon?

   b) Simon counted 27 sparrows at the bird feeder on Wednesday and 19 sparrows on Thursday. How many more sparrows did he see on Wednesday than on Thursday?
5. Draw the model. Find the size of one block in the model. Then solve the problem.

   a) A jacket costs twice as much as a hat. Kim paid $36 for a jacket and a hat. How much did each item cost?

   b) A set of guitar strings costs $7. How much do 4 sets of guitar strings cost?

   c) Arthur is 15 years old. Arthur is 5 times as old as Mary. How old is Mary?
1. a) \[+\quad \begin{array}{c}
\begin{array}{c}
\circ \\
\○
\end{array}
+ \begin{array}{c}
\begin{array}{c}
\circ \\
\○
\end{array}
\end{array}
\end{array} = \begin{array}{c}
\begin{array}{c}
\circ \\
\○
\end{array}
\begin{array}{c}
\begin{array}{c}
\circ \\
\○
\end{array}
\end{array}
\end{array}
\]
\[4 + 5 = 9\]

b) \[-\quad \begin{array}{c}
\begin{array}{c}
\circ \\
\○
\end{array}
- \begin{array}{c}
\begin{array}{c}
\circ \\
\○
\end{array}
\end{array}
\end{array} = \begin{array}{c}
\begin{array}{c}
\circ \\
\○
\end{array}
\begin{array}{c}
\begin{array}{c}
\circ \\
\○
\end{array}
\end{array}
\end{array}
\]
\[3 = 10 - 7\]

2. a) \[5\]
\[20 \div 4 = \]

b) \[32\]
\[64 \div 2 = \]

**BONUS**

\[100\]
\[800 \div 8 = \]

3. a) Circle 16 grapes altogether
\[16 - 12 = x\]
\[x = 4\]

b) Circle 22 grapes altogether
\[22 - 14 = x\]
\[x = 8\]

c) Circle 19 grapes altogether
\[19 - 17 = x\]
\[x = 2\]

4. a) \[12 - x = 3\]
\[12 - 3 = x\]
\[x = 9\]

b) \[27 - x = 19\]
\[x = 27 - 19\]
\[x = 8\]

5. a) Selected solution:
Jacket: \[\begin{array}{c}
\begin{array}{c}
\circ \\
\○
\end{array}
\end{array} \quad \text{Hat: } \begin{array}{c}
\begin{array}{c}
\circ \\
\○
\end{array}
\end{array}\]
$38

The jacket cost $24 and the hat cost $12.

b) Four sets of guitar strings cost $28.

c) Mary is 3 years old.
1. Find the area of the figure in square centimetres.
   a) 
   
   
   
   
   
   
   Area = ____ cm²
   
   b) 
   
   
   
   
   
   
   Area = ____ cm²

2. Ella measured the areas of objects at school, but she forgot to write down the units. Fill in the blanks with “m²” or “cm².”
   a) The board measures 2 ____. 
   b) A book cover measures 375 ____. 
   c) A hundreds block measures 100 ____. 
   d) The field measures 63 ____. 

3. Find the area of the rectangle using the length and width. Include the units.
   a) Length = 7 m 
   b) Length = 9 m 
   c) Length = 4 cm 
   Width = 6 m 
   Width = 3 m 
   Width = 8 cm 
   Area = _______ 
   Area = _______ 
   Area = _______ 

4. Draw a line to divide the figure into two rectangles. Use the areas of the rectangles to find the total area of the figure.
   a) 
   
   
   
   
   
   Area of rectangle 1 = _______. 
   Area of rectangle 2 = _______. 
   Total area = _______. 
   b) 
   
   
   
   
   
   Area of rectangle 1 = _______. 
   Area of rectangle 2 = _______. 
   Total area = _______. 

BONUS► Find a different way to calculate the area of the shape in Question 4.a). Did you get the same answer? Why or why not?
1. a) 12
   b) 8
2. a) m²
   b) cm²
   c) cm²
   d) m²
3. a) 42 m²
   b) 27 m²
   c) 32 cm²
4. a) 6 cm²
   24 cm²
   30 cm²
   b) 10 m²
   18 m²
   28 m²

**BONUS**

The area should be the same no matter how it is calculated.
1. Find the area of the figure in square centimetres.

   a) 
   
   Area = ____ cm\(^2\)

   b) 
   
   Area = ____ cm\(^2\)

2. Ella measured the areas of objects at school, but she forgot to write down the units. Fill in the missing blanks with “m\(^2\)” or “cm\(^2\).”
   a) The window measures 1 ____.   b) The paper measures 585 ____.

3. Find the area of the rectangle using the length and width. Include the units.
   a) Length = 7 cm   Width = 7 cm
       Area = ________
   
   b) Length = 6 m   Width = 4 m
       Area = ________
   
   c) Length = 3 cm   Width = 8 cm
       Area = ________
4. Draw a line to divide the figure into two rectangles. Use the areas of the rectangles to find the total area of the figure.

a) 

3 cm

2 cm

4 cm

4 cm

6 cm

7 cm

Area of rectangle 1 = _______

Area of rectangle 2 = _______

Total area = _______

b) 

2 m

3 m

6 m

4 m

1 m

8 m

Area of rectangle 1 = _______

Area of rectangle 2 = _______

Total area = _______

**BONUS**► Find the area of the shaded shape using the two rectangles.


3 m

2 m

1 m

Area of rectangle 1 = _______

Area of rectangle 2 = _______

Shaded area = _______
1. a) 15  
b)  8  
2. a) m^2  
b) cm^2  
3. a) 49 cm^2  
b) 24 m^2  
c) 24 cm^2  
4. a) 6 cm^2  
   28 cm^2  
   34 cm^2  
b) 6 cm^2  
   8 cm^2  
   14 cm^2  
BONUS  
   24 cm^2  
   2 cm^2  
   22 cm^2
1. Write the time the way it looks on a digital clock.
   a) 17 minutes after 5   b) 10 minutes before 9   c) 7 o’clock
   □□ : □□   □□ : □□   □□ : □□

2. Write “a.m.” or “p.m.”
   a) Bedtime is 8:30 _____   b) Breakfast is at 8:30 _____

3. The time is from a 24-hour clock. Write it the way you would for a 12-hour clock.
   a) 15:00   b) 3:25   c) 12:01   d) 20:40
   _______   _______   _______   _______

4. Write the time as it would look on a 24-hour clock.
   a) 1:20 p.m.   b) 7:19 a.m.   c) 10:45 p.m.  BONUS ▶ 12:15 a.m.
   _______   _______   _______   _______

5. Write the time two ways.
   a)   b)   c)   c)
   ___________   ___________   _______________  ______________
   _____ : _______   _____ : _______   _____ : _______

BONUS ▶ Why do you think clock faces are round?
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
Unit 13: Measurement

Quiz (Lessons 21–23) — AB

1. a) 05:17
   b) 08:50
   c) 07:00
2. a) p.m.
   b) a.m.
3. a) 3:00 p.m.
   b) 3:25 a.m.
   c) 12:01 p.m.
   d) 8:40 p.m.
4. a) 13:20
   b) 07:19
   c) 22:45

BONUS
   00:15
5. a) half past 1
    1:30
   b) quarter to 6
    5:45
   c) quarter past 9
    9:15

BONUS
   Answers will vary. Teacher to check.
Unit 13: Measurement

Quiz (Lessons 24, 25, 28) — AB

1. Draw hands on the clock to show the time.
   a) 4:15
   b) 6:35
   c) 10:10

2. Write the exact time.
   a)          b)          c)

3. Write the date using only numbers.
   a) July 5, 1983   b) March 5, 2019   c) November 21, 2035
      _____ / _____ / _____   _____ / _____ / _____   _____ / _____ / _____
      dd / mm / yy          yyyy / mm / dd           yy / mm / dd

4. Write the date in words.
   a) 1985/10/05   b) 2040/05/04   c) 1484/02/29
      _____________________   _____________________   _____________________

5. Why is there an international standard for writing dates? Give examples.
Unit 13: Measurement

Quiz (Lessons 24, 25, 28) — AB

1. Teacher to check.
2. a) 7:48  
   b) 4:29  
   c) 10:11
3. a) 05/07/83  
   b) 2019/03/05  
   c) 35/11/21
4. a) October 5, 1985  
   b) May 4, 2040  
   c) February 29, 1484
5. Answers will vary. Sample answer: Because dates can be confusing. The same numbers could be the day, the month, or the year. For example, 04/05/2018 could be April 5, 2018 or May 4, 2018.
1. Write the time in words.
   a) 3:30  
    ______________________________
   b) 4:27  
    ______________________________

2. Write “a.m.” or “p.m.”
   a) School starts at 8:30 _____  
      b) Dinner is at 6:30 _____

3. The time is from a 24-hour clock. Write it the way you would for a 12-hour clock.
   a) 18:00  
      __________
   b) 02:25  
      __________
   c) 12:01  
      __________
   d) 16:45  
      __________

4. Write the time as it would look on a 24-hour clock.
   a) 3:35 p.m.  
      __________
   b) 6:15 a.m.  
      __________
   c) 11:45 p.m.  
      __________
   D) 12:15 p.m.  
      __________

5. Draw hands on the clock to show the time.
   a) __________________  
      3:45  
      b) __________________  
      11:25  
      c) __________________  
      6:10

6. Write the time two ways.
   a) __________________  
      _______ : _______
   b) __________________  
      _______ : _______
   c) __________________  
      _______ : _______
7. On what day of the week is the date?

<table>
<thead>
<tr>
<th>Sunday</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td>16</td>
<td>17</td>
<td>18</td>
<td>19</td>
<td>20</td>
<td>21</td>
<td>22</td>
</tr>
<tr>
<td>23</td>
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May 2021

a) May 5, 2021 _______________  b) 2021-05-22 _______________

c) 17/05/21 _______________  d) 05 / 16 / 21 _______________

e) 07/05/2021 _______________  BONUS  ▶  2021-06-07 _______________

8. a) What time is it now? ___________

b) Is it a.m. or p.m.? ___________
Unit 13: Measurement

Test (Lessons 21–25, 28) — AB

1. a) Sample answer: three thirty
   b) Sample answer: 27 minutes after 4
2. a) a.m.
   b) p.m.
3. a) 6:00 p.m.
   b) 2:25 a.m.
   c) 12:01 p.m.
   d) 4:45 p.m.
4. a) 15:35
   b) 06:15
   c) 23:45

BONUS
   12:15
5. Teacher to check.
6. a) 33 after 9
   b) 4 after 5
   c) 4 minutes to 1

BONUS
   Monday
7. a) Wednesday
   b) Saturday
   c) Monday
   d) Sunday
   e) Friday
8. Answers will vary. Teacher to check.
1. Shade the base of the prism. Then name the prism.

   a) b) c) d) 

   ___________ ___________ ___________ ___________ 

2. Trace and count the edges.

   a) b) c) d) 

   ___ edges ___ edges ___ edges ___ edges 

3. Match the net to the 3-D object.

   A. B. C. D. E. 

   a) b) c) d) e) 

   ____ ____ ____ ____ ____ 

BONUS ▶ A net has 2 square faces and 4 rectangular faces. What shape does it make? Explain.
1. a) cube  
   b) triangular prism  
   c) square-based prism  
   d) rectangular prism  
2. a) 8  
   b) 9  
   c) 12  
   d) 6  
3. a) E  
   b) A  
   c) B  
   d) D  
   e) C  

**BONUS**  
It makes a square-based prism because the square faces must be the bases.
1. Shade the base of the prism. Then name the prism.

   a)  
   b)  
   c)  
   d)  

2. Draw a dot on each vertex. Count the vertices.

   a)  
   b)  
   c)  
   d)  

3. Match the net to the 3-D object.

   A.  
   B.  
   C.  
   D.  
   E.  

   a)  
   b)  
   c)  
   d)  
   e)  

BONUS ▶ A prism has 6 vertices. What kind of prism is it? Explain.
1. a) square-based prism
   b) rectangular prism
   c) triangular prism
   d) cube
2. Teacher to check dots.
   a) 5
   b) 6
   c) 8
   d) 4
3. a) C
   b) D
   c) A
   d) E
   e) B

BONUS

It is a triangular prism because the bases each have 3 vertices.