

**Answer Key – Multiple Choice**

**DMA End of Grade 6, Beginning of Grade 7**

<b>Number</b>	<b>Answer</b>	<b>Strand</b>	<b>Descriptor</b>	<b>Prescribed L O</b>
1	D	Number	Word to numeral	A1
2	D	Number	Percent pictorial	A6
3	A	Number	Factoring	A3
4	D	Number	Ratio pictorial	A5
5	C	Number	Fractions pictorial	A4
6	C	Number	Integers Compare	A7
7	A	Number	Order of Operations	A9
8	A	Number	Percent	A6
9	C	Number	Decimal to word	A1
10	C	Number	Decimals multiplication	A8
11	B	Patterns	T – table	B1
12	B	Patterns	Pattern rule (equations)	B3
13	D	Patterns	Table representation	B2
14	C	Shape and Space	Interior angles of triangles	C2
15	B	Shape and Space	Volume	C3
16	A	Shape and Space	Classification of angles	C1
17	B	Shape and Space	Classification of triangles	C4
18	D	Shape and Space	Transformation	C6
19	D	Shape and Space	Perimeter	C3
20	C	Shape and Space	Ordered pairs	C8
21	A	Shape and Space	Polygon identification	C5
22	D	Statistics and Probability	Line Graph	D1
23	C	Statistics and Probability	Sample Survey	D2
24	A	Statistics and Probability	Probability	D4

25.

<b>50¢</b>	<b>75¢</b>
<b>10</b>	<b>0</b>
<b>7</b>	<b>2</b>
<b>4</b>	<b>4</b>
<b>1</b>	<b>6</b>

Key PLO: D4

26. **1mm**

Watch for common error of 50 cm (one half) and 10 cm (one tenth).

Key PLO: A1

**Basic Math Computations**

<b>328 150</b> A3 Grade 4 (with A1 Grade 6 place value magnitude)	<b>390 728</b> A3 Grade 4 (with A1 Grade 6 place value magnitude)	<b>245</b> A6 Grade 4	<b>392</b> A5 Grade 5
<b>34 780</b> (A5 Grade 5 extended to 3-digit by 2-digit)	<b>21.666...</b> <b>21.667</b> <b>21 2/3</b> <b>21 r2</b> A6 Grade 5	<b>90</b> A6 Grade 5	<b>447.31</b> A11 Grade 5
<b>6.9</b> A11 Grade 5	<b>62.091</b> A11 Grade 5	<b>608.3</b> A8 Grade 6	<b>1597.46</b> A8 Grade 6
<b>1.86</b> A8 Grade 6	<b>0.445</b> A8 Grade 6	<b>31</b> A9 Grade 6	<b>49</b> A9 Grade 6

## Scoring Rubric: Short problem-solving activities (paper and pencil) Grades 4-7

Note: this is appropriate to use as a scoring rubric for short, paper and pencil problems. Generally, for short tasks, the communication section should not receive as much weight as the others because students have limited opportunity to display skills in this area—their explanations becomes part of 'concepts'. However, if the task requires a representation (e.g., a graph, diagram) that part of the rubric should be included.

Note that in some cases, where detailed feedback is not required, the 'snapshot' alone may be sufficient.

Task: \_\_\_\_\_ GRADE \_\_\_\_\_

Strand	Key concepts required by this task (see IRP p. 16)

	Not Yet Within Expectations	Meets Minimal Expectations	Fully Meets Expectations	Exceeds Expectations
<b>Snapshot</b>	<i>Does not reach a reasonable solution. Does not meet basic requirements of the problem.</i>	<i>Partially solves the problem and meets some basic requirements. Solution is incomplete or flawed..</i>	<i>Solution is reasonable and complete for all parts of the task. All requirements met (may be minor flaws.)</i>	<i>Solution is well-developed and justified. Thoroughly satisfies requirements; may be insightful or innovative..</i>
<b>Concepts</b> - recognizes the mathematics needed; explanation shows understanding of concepts	<ul style="list-style-type: none"> <li>Does not recognize the mathematics; shows little/no understanding (may misunderstand)</li> </ul>	<ul style="list-style-type: none"> <li>Recognizes/applies some concepts needed; shows partial understanding (often vague/incomplete)</li> </ul>	<ul style="list-style-type: none"> <li>Recognizes/applies concepts needed; shows understanding of relevant concepts</li> </ul>	<ul style="list-style-type: none"> <li>Recognizes/applies concepts needed (may make insightful connections); shows thorough understanding</li> </ul>
<b>Problem-solving and reasoning</b> Uses appropriate strategies to solve the problem  Verifies and justifies that results are reasonable	<ul style="list-style-type: none"> <li>Does not use appropriate strategies</li> <li>Does not verify results or solutions</li> </ul>	<ul style="list-style-type: none"> <li>Uses appropriate strategies for some parts</li> <li>Attempts to verify or justify results or solutions but is not fully successful</li> </ul>	<ul style="list-style-type: none"> <li>Uses appropriate strategies for all parts</li> <li>Verifies and justifies results or solutions (may be imprecise)</li> </ul>	<ul style="list-style-type: none"> <li>Selects and uses highly effective, and often innovative, strategies</li> <li>Verifies and justifies results or solutions with precision</li> </ul>
<b>Procedures</b> -shows accuracy and precision (e.g., in recording, substitutions, calculations, units, and symbols); efficient	<ul style="list-style-type: none"> <li>Limited accuracy; major errors or omissions</li> </ul>	<ul style="list-style-type: none"> <li>Follows procedures with partial accuracy; some errors or omissions</li> </ul>	<ul style="list-style-type: none"> <li>Follows procedures accurately with minor errors or omissions</li> </ul>	<ul style="list-style-type: none"> <li>Follows procedures accurately; very few if any minor errors/omissions; highly efficient</li> </ul>
<b>Communication</b> - clear, complete, organized using words, pictures and/or numbers <i>Note: explanation is included under 'concepts'</i>	<ul style="list-style-type: none"> <li>Unclear; confusing and/or incomplete</li> </ul>	<ul style="list-style-type: none"> <li>Presents parts of the process and solution; parts are omitted or unclear.</li> </ul>	<ul style="list-style-type: none"> <li>Presents process and solution clearly</li> </ul>	<ul style="list-style-type: none"> <li>Presents process and solution clearly and effectively</li> </ul>

<b>Representation (Graphics)</b>	<i>If required:</i>	<i>if required.</i>	<i>If required.</i>	<i>If required.</i>
<b>If required/relevant</b> -includes appropriate graphics; representations (e.g., charts, tables, graphs, diagrams; sketches)	<ul style="list-style-type: none"> <li>Omits required graphics or representations and/or does not construct them appropriately; many omissions; serious flaws</li> </ul>	<ul style="list-style-type: none"> <li>Constructs most required graphics and/or representations; parts are omitted or inappropriate</li> </ul>	<ul style="list-style-type: none"> <li>Constructs required graphics and/or representations appropriately; may have minor errors or flaws (e.g., missing labels)</li> </ul>	<ul style="list-style-type: none"> <li>Constructs required graphics and/or representations effectively and accurately</li> </ul>

# Numeracy Performance Standards, Grade 6 Prototype

## Quick Scale: Numeracy Performance Standards (Grades 4-6)

Task: \_\_\_\_\_

GRADE \_\_\_\_\_

Strand	Key concepts required by this task (see IRP p. 16)

	Not Yet Within Expectations	Meets Minimal Expectations	Fully Meets Expectations	Exceeds Expectations
<b>Snapshot</b>	<i>Does not meet basic requirements of the task(s) without close, ongoing assistance. Usually unable to explain result.</i>	<i>Satisfies basic requirements for most parts of the task, but some important aspect is flawed or incomplete. Partial explanation.</i>	<i>Satisfies basic requirements for all parts of the task(s); reaches and explains reasonable solution(s). (may be minor flaws)</i>	<i>Thoroughly satisfies requirements of all parts of the task; solution is well-developed and justified; often insightful or innovative.</i>
<b>Concepts and Connections</b> - recognizes the math; applies appropriate concepts [R] [V] [CN] - explains/demonstrates relevant concepts; makes connections [R]	<ul style="list-style-type: none"> <li>Does not recognize or apply basic concepts needed for the task(s)</li> <li>Shows little understanding of relevant concepts; explanations are incomplete or illogical</li> </ul>	<ul style="list-style-type: none"> <li>Recognizes/applies concepts needed for most parts of the task(s) (may not be best choice)</li> <li>Shows partial understanding of relevant concepts; explanations may be vague; partially incomplete</li> </ul>	<ul style="list-style-type: none"> <li>Recognizes/applies concepts needed for all parts of the task(s)</li> <li>Shows understanding of relevant concepts; explanations are logical and complete</li> </ul>	<ul style="list-style-type: none"> <li>Recognizes/applies a wide range of concepts including those that have not been recently taught; may offer alternatives</li> <li>Shows thorough understanding; explanations are insightful;</li> </ul>
<b>Problem-solving and reasoning</b> -selects and uses appropriate strategies to analyze, solve and create problems [PS] [V] [T] - flexible; perseveres - uses estimation strategies [ME] - verifies and justifies that results are reasonable [R]	<ul style="list-style-type: none"> <li>Does not use appropriate strategies; requires extensive support</li> <li>No flexibility; does not persevere to a solution</li> <li>Does not verify or justify</li> <li>Unable to use estimation strategies (answers are often highly improbable)</li> </ul>	<ul style="list-style-type: none"> <li>Uses some appropriate strategies if problem appears familiar; may need some help</li> <li>Limited flexibility and perseverance</li> <li>Needs help to verify or justify; inconsistent</li> <li>Some evidence of estimation; (some answers reasonable)</li> </ul>	<ul style="list-style-type: none"> <li>Uses appropriate strategies</li> <li>Shows some flexibility; in most cases, perseveres to find a solution</li> <li>With prompting, verifies and justifies</li> <li>Uses estimation strategies appropriately; most answers are reasonable</li> </ul>	<ul style="list-style-type: none"> <li>Uses appropriate strategies; often innovative; may add some complexity</li> <li>Shows flexibility; perseverance to find a solution</li> <li>Verifies; justifies</li> <li>Uses effective estimation strategies; answers are reasonable (relatively precise)</li> </ul>
<b>Procedures</b> - accurate and precise in recording, substitutions, calculations, units, and symbols [C] - fluent; efficient in applying procedures including mental math [ME]	<ul style="list-style-type: none"> <li>Follows procedures with limited accuracy; major errors or omissions</li> <li>Inefficient; struggles (e.g., false starts; repeats; little evidence of mental math strategies)</li> </ul>	<ul style="list-style-type: none"> <li>Follows procedures with partial accuracy; some errors or omissions</li> <li>Inconsistent; may be fluent with some procedures but inefficient or not demonstrated in others</li> </ul>	<ul style="list-style-type: none"> <li>Follows procedures accurately with some minor errors or omissions</li> <li>Uses most procedures and mental math strategies fluently; may be inefficient</li> </ul>	<ul style="list-style-type: none"> <li>Follows procedures with accuracy and precision; very few if any minor errors/omissions</li> <li>Uses procedures and mental math strategies fluently and efficiently; may find own 'shortcuts'</li> </ul>
<b>Representation and Communication</b> -communicates mathematically including mathematical language [C] -includes appropriate graphics; representations (e.g., charts, tables, graphs, diagrams; sketches) [V]	<ul style="list-style-type: none"> <li>Does not explain procedures and results clearly</li> <li>Omits required graphics or representations and/or does not construct them appropriately; many omissions; serious flaws</li> </ul>	<ul style="list-style-type: none"> <li>Partially explains procedures; results; parts are confusing, vague, incomplete</li> <li>Constructs most required graphics; representations; parts are seriously flawed/incomplete (e.g., scale inappropriate)</li> </ul>	<ul style="list-style-type: none"> <li>Explains results and procedures clearly using some mathematical language</li> <li>Constructs required graphics and/or representations appropriately; may have minor errors or flaws (e.g., missing labels)</li> </ul>	<ul style="list-style-type: none"> <li>Explains procedures and results precisely; uses mathematical language</li> <li>Constructs required graphics and/or representations effectively and accurately</li> </ul>

Used for major tasks, projects, or ongoing observations.