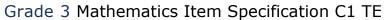| Task Model 1

Response Type:
Equation/Numeric

DOK Level 1

3.NBT.A.1
Use place value understanding to round whole numbers to the nearest 10 or 100.

Evidence Required:
1. The student solves non-contextual problems using place value understanding to round whole numbers to the nearest 10 or 100.

Tools: None | **Prompt Features:** The student is prompted to solve place value problems that include rounding whole numbers to the nearest 10 or 100.

Stimulus Guidelines:
• Follow stated guidelines on allowable number ranges.
• Item difficulty can be adjusted via these example methods:
   o Two-digit number that rounds to the nearest ten
   o Three-digit number that rounds to the nearest hundred
   o Three-digit number that rounds to the nearest ten

TM1a
Stimulus: The student is presented with a two- or three-digit number, and then asked to round to the nearest ten or hundred.

Example Stem 1: What is 44 rounded to the nearest ten?

Example Stem 2: What is 456 rounded to the nearest ten?

Example Stem 3: What is 726 rounded to the nearest hundred?

Rubric: (1 point) The student correctly enters the number rounded to the given place (e.g., 40; 460; 700).

Response Type: Equation/Numeric |

| Task Model 1

Response Type:
Equation/Numeric

DOK Level 1

3.NBT.A.1
Use place value understanding to round whole numbers to the nearest 10 or 100.

Evidence Required:
1. The student solves non-contextual problems using place value understanding to round whole numbers to the nearest 10 or 100.

Tools: None | **Prompt Features:** The student is prompted to solve place value problems that include entering the least or greatest whole number that rounds to a given two- or three-digit whole number.

Stimulus Guidelines:
• Follow stated guidelines on allowable number ranges.
• Item difficulty can be adjusted via these example methods:
   o Identifies the least or greatest number that rounds to the nearest ten in a two-digit number.
   o Identifies the least or greatest number that rounds to the nearest ten in a three-digit number.
   o Identifies the least or greatest number that rounds to the nearest hundred in a three-digit number.

TM1b
Stimulus: The student is given a two- or three-digit whole number rounded to the nearest ten or hundred.

Example Stem 1: When rounding to the nearest ten, what is the **least** whole number that rounds to 50?

Example Stem 2: When rounding to the nearest ten, what is the **greatest** whole number that rounds to 50?

Example Stem 3: When rounding to the nearest hundred, what is the **least** whole number that rounds to 500?

Example Stem 4: When rounding to the nearest hundred, what is the **greatest** whole number that rounds to 500?

Example Stem 5: When rounding to the nearest ten, what is the **least** whole number that rounds to 520?

Example Stem 6: When rounding to the nearest ten, what is the **greatest** whole number that rounds to 520?

Rubric: (1 point) The student correctly enters the least/greatest whole number that rounds to the given number (e.g., 45; 54; 450; 549; 515; 524).

Response Type: Equation/Numeric

Source: http://www.illustrativemathematics.org/3.NBT.A.1 |

Task Model 2a-b **Response Type: Equation/Numeric** **DOK Level 1** **3.NBT.B.2** Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. **Evidence Required:** 2. The student solves non-contextual problems by adding and/or subtracting within 1000, using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. **Tools:** None	**Prompt Features:** The student is prompted to find the unknown number that makes an equation true by adding and/or subtracting within 1000, using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. **Stimulus Guidelines:**
	 • The student is presented with a non-contextual addition or subtraction equation.
	 • Follow any stated guidelines on allowable number ranges.
	 • Unknown numbers are represented by a box (□).
	 • Item difficulty can be adjusted via these example methods:
	     o Number of addends in addition equation
	     o Requires regrouping or not
	     o Sum or difference is on the left or right side of the equation
	     o Number of digits in addends (2 digits vs. 3 digits) and number of digits in subtrahends & minuends (2 digits vs. 3 digits) **TM2a** **Stimulus:** The student is presented with a non-contextual, straightforward addition equation with two to four addends. **Example Stem 1:** What unknown number makes this equation true? $763 + 29 = \square$ **Example Stem 2:** What unknown number makes this equation true? $\square = 763 + 29$ **TM2b** **Stimulus:** The student is presented with a non-contextual, straightforward subtraction equation with two to four subtrahends. **Example Stem 1:** What unknown number makes this equation true? $763 - 96 = \square$ **Example Stem 2:** What unknown number makes this equation true? $\square = 763 - 96$ **Rubric:** The student enters the correct difference (e.g., 792; 792; 667; 667). **Response Type:** Equation/Numeric

Task Model 2c-d	**Prompt Features:** The student is prompted to find the unknown number that makes an equation true by adding and/or subtracting within 1000, using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
Response Type: Equation/Numeric	
DOK Level 1	
3.NBT.A.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	**Stimulus Guidelines:** • The student is presented with a non-contextual addition or subtraction equation. • Follow any stated guidelines on allowable number ranges. • Item difficulty can be adjusted via these example methods: ○ One addend/subtrahend is close to 10 or 100. ○ Numbers in the ones place combine to make 10, or numbers in the tens place combine to make 100. ○ Subtract from the hundreds, tens or ones. ○ Unknown number may be presented on either side of the equation.
Evidence Required: 2. The student solves non-contextual problems by adding and/or subtracting within 1000, using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	**TM2c** **Stimulus:** The student is presented with a non-contextual addition equation. One addend is within 5 of 100 and one addend is 100. **Example Stem 1:** What unknown number makes this equation true? $763 + 97 = 763 + 100 - \square$ **Example Stem 2:** What unknown number makes this equation true? $763 + 104 = 763 + 100 + \square$
Tools: None	**TM2d** **Stimulus:** The student is presented with a non-contextual addition equation. One addend is within 4 of multiple of ten and one addend is a multiple of 100. **Example Stem 1:** What unknown number makes this equation true? $763 + 7 = 700 + \square$ **Example Stem 2:** What unknown number makes this equation true? $763 + 43 = 800 + \square$ **Rubric:** The student enters the correct number to make the equation true (e.g., 3; 4; 70; 6). **Response Type:** Equation/Numeric

Task Model 2e-f	**TM2e**
Response Type: Equation/Numeric	**Stimulus:** The student is presented with a non-contextual subtraction equation. One subtrahend is within 5 of 100 and one subtrahend is 100.
DOK Level 1	**Example Stem 1:** What unknown number makes this equation true?
3.NBT.A.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	763 – 97 = 763 – 100 + □ **Example Stem 2:** What unknown number makes this equation true? 763 – 104 = 763 – 100 - □
Evidence Required: 2. The student solves non-contextual problems by adding and/or subtracting within 1000, using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	**TM2f** **Stimulus:** The student is presented with a non-contextual subtraction equation. One subtrahend is a multiple of 10. **Example Stem 1:** What unknown number makes this equation true? 763 – 43 = 763 – 40 – □ **Example Stem 2:** What unknown number makes this equation true? 760 – 70 = 760 – 60 – □
Tools: None	**Rubric:** The student enters the correct number to make the equation true (e.g., 3; 4; 3; 10). **Response Type:** Equation/Numeric
Version 3 Update: Edited wording and example stems for TM2f.	

| Task Model 2g

Response Type: Matching Tables

DOK Level 1

3.NBT.A.2
Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

Evidence Required:
2. The student solves non-contextual problems by adding and/or subtracting within 1000, using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

Tools: None

Version 3 Update: Added new TM2g. | **Prompt Features:** The student categorizes sums and differences within 1000 as either closer to a given number or greater than/less than a given number.

Stimulus Guidelines:
• Sums and differences are selected to encourage appropriate uses of rounding as a strategy.

TM2g
Stimulus: The student is presented with a table and sums or differences (but not both), and classifies them as closer to a given number or greater than/less than a given number.

Example Stem 1: Select whether each sum is greater than 80 or less than 80. |

Example Stem 1: Select whether each sum is greater than 80 or less than 80.

	Greater than 80	Less than 80
41 + 42		
33 + 35		
41 + 36		
46 + 37		

Example Stem 2: Select whether each difference is greater than 40 or less than 40.

	Greater than 40	Less than 40
83 – 40		
85 – 43		
83 – 45		
80 – 43		

Example Stem 3: Select whether each difference is greater than 40 or less than 40.

	Greater than 40	Less than 40
80 – 49		
80 – 43		
80 – 38		

Rubric: (1 point) The student enters the correct value for the unknown (e.g., GLLG; GGLL; LLG).

Response Type: Matching Tables

Task Model 2g	**Example Stem 4:** Identify whether each sum is closer to 70 or closer to 80.

Task Model 2g

Response Type: Matching Tables

DOK Level 1

3.NBT.A.2
Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

Evidence Required:
2. The student solves non-contextual problems by adding and/or subtracting within 1000, using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

Tools: None

Version 3 Update: Added new TM2g.

Example Stem 4: Identify whether each sum is closer to 70 or closer to 80.

	Closer to 70	**Closer to 80**
32 + 47		
26 + 51		
35 + 37		

Example Stem 5: Click the table to show whether each sum is closer to 400 or closer to 500.

	Closer to 400	**Closer to 500**
302 + 105		
398 + 49		
212 + 247		
196 + 251		

Rubric: (1 point) The student enters the correct value for the unknown (e.g., 80, 80, 70; 400, 400, 500, 400).

Response Type: Matching Tables

| Task Model 3a

Response Type:
Equation/Numeric

DOK Level 1

3.NBT.A.3
Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations.

Evidence Required:
3. The student solves non-contextual computation problems by multiplying one-digit whole numbers by multiples of 10 in the range 10–90 using strategies based on place value and properties of operations.

Tools: None | **Prompt Features:** The student is prompted to find the unknown number that makes a multiplication equation true involving multiplication of single-digit whole numbers by multiples of 10.

Stimulus Guidelines:
• Multiplication problems are presented as equations with a box (□) for the unknown factor or product.
• Solutions for multiplication problems must be **within** 1000.
• Item difficulty can be adjusted via these example methods:
  o Single-digit factor is multiplied by a two-digit multiple of ten. The product is unknown.
  o Single-digit factor is multiplied by an unknown. The product is a multiple of ten.
  o Two-digit multiple of ten is multiplied by an unknown single-digit number. The product is known.
  o Product is listed first in the equation.

TM3a
Stimulus: The student is presented with a multiplication equation including an unknown factor or product.

Example Stem 1: What unknown number makes the equation true?
5 x 80 = □

Example Stem 2: What unknown number makes the equation true?
3 x □ = 180

Example Stem 3: What unknown number makes the equation true?
180 = □ x 3

Example Stem 4: What unknown number makes the equation true?
60 x □ = 540

Example Stem 5: What unknown number makes the equation true?
540 = □ x 60

Rubric: (1 point) The student enters the correct product (e.g., 400; 60; 60; 9; 9).

Response Type: Equation/Numeric |

| Task Model 3b

Response Type:
Equation/Numeric

DOK Level 1

3.NBT.B.3
Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations.

Evidence Required:
3. The student solves non-contextual computation problems by multiplying one-digit whole numbers by multiples of 10 in the range 10–90 using strategies based on place value and properties of operations.

Tools: None | **Prompt Features:** The student is prompted to find the unknown number that makes a multiplication equation true involving multiplication of single-digit whole numbers by multiples of 10.

Stimulus Guidelines:
• Multiplication problems are presented as equations with a box (□) for the unknown factor or product.
• Solutions for multiplication problems must be **within** 1000.
• Item difficulty can be adjusted via these example methods:
    ○ Three single-digit factors when multiplied together have a product that is a multiple of ten.
    ○ Decompose a multiple of ten to make a three factor multiplication problem.

TM3b
Stimulus: A whole number multiplication equation presented horizontally including three factors.

Example Stem: What unknown number makes the equation true?

(6 x 5) x □ = 240

Rubric: (1 point) The student enters the correct value for the unknown (e.g., 8).

Response Type: Equation/Numeric |