

Task Model 1a	Prompt Features: The student is prompted to solve a one-step
	contextual word problem.
Response Type:	
Equation/Numeric	Stimulus Guidelines:
_4,	Products for multiplication problems must be within 100
DOK Level 1	and single-digit factors.
	 Item difficulty can be adjusted via these example
3.04.4.3	methods:
Use multiplication and	 Student solves for the unknown product.
division within 100 to	• Student solves for the unknown factor.
solve word problems in	
situations involving	TM1a
equal groups, arrays,	Stimulus: The student is presented with a one-step word
and measurement	problem for a situation involving an array composed of objects
quantities, e.g., by using	familiar to 8–9 year olds.
drawings and equations	
with a symbol for the	Example Stem 1: There are 3 rows of pictures with 2 pictures in
unknown number to	each row.
represent the problem.	
	How many pictures are there?
Evidence Required:	, ,
1. The student uses	Example Stem 2: The pictures on a page in a picture album are
multiplication and	in 3 rows and 2 columns.
division within 100 to	
solve straightforward	How many pictures are on the page?
one-step word problems	
in situations involving	Example Stem 3: Tim has 6 pictures arranged into 3 equal rows
equal groups, arrays,	on a page.
and measurement	
quantities such as	How many pictures are in each row?
length, liquid volume	
and masses of objects.	Example Stem 4: Claire arranges 6 pictures into an array with 3
	rows.
Tools: None	How many columns of pictures are in the array?
	Example Stem 5: Chris arranges 6 pictures into equal rows of 2
	pictures.
	How many rows are there?
	Example Store C. Lice anyong as C. nictures into an average with 2
	Example Stem 6: Lisa arranges 6 pictures into an array with 2
	columns.
	How many rough of nictures are in the array?
	now many rows of pictures are in the array?
	Dubricy (1 point) The student correctly enters the colution (a.g.
	(1, 0) $(1, 0)$ $(1, 0)$ $(2, 0)$ $($
	$\cup_1 \cup_1 \angle_1 \angle_1 \cup_1 \cup_1$
	Response Type: Equation/Numeric
	Nesponse ryper Equation/numeric



Task Model 1b	Prompt Features: The student is prompted to solve a one-step
	contextual word problem.
Response Type:	
Equation/Numeric	Stimulus Guidelines:
	 Dividends for division problems must be within 100 and
DOK Level 1	single-digit divisors.
	 Item difficulty can be adjusted via these example
3.0A.A.3	methods:
Use multiplication and	 Student solves for the unknown product
division within 100 to	(multiplication problem where the number of items
solve word problems in	and groups are given).
situations involving	• Student solves for the unknown group size
equal groups, arrays,	(division problem where the total number of items
and measurement	and number of groups are given).
quantities, e.g., by	 Student solves for the unknown number of groups (division problem where the total number of items)
using drawings and	(division problem where the total number of items
for the unknown number	and the number of items in each group are given).
to represent the	TM1b
problem	Stimulus: The student is presented with a one-step word
problem.	problem for a situation involving equal groups composed of
Evidence Required:	objects familiar to 8–9 year olds.
1. The student uses	
multiplication and	Example Stem 1: There are 3 bags with 9 blocks in each bag.
division within 100 to	How many blocks are there in all?
solve straightforward	,
one-step word problems	Example Stem 2: Mary has 27 blocks. She puts them into 3
in situations involving	bags. Each bag has an equal number of blocks.
equal groups, arrays,	
and measurement	How many blocks are in each bag?
quantities such as	
length, liquid volume	Example Stem 3: Mary has 27 blocks. She can put 9 blocks in
and masses of objects.	each bag.
loois: None	How many bags does she need for all 27 blocks?
	Pubric: (1 point) The student enters the correct solution (a g
	$27 \cdot 9 \cdot 3$
	Response Type: Equation/Numeric



Task Model 1c	Prompt Features: The student is prompted to solve a one-step contextual word problem.
Response Type: Equation/Numeric DOK Level 1	 Stimulus Guidelines: Indicate that the objects are exactly the same. Products for multiplication problems and dividends for division problems must be within 100 and single-digit factors.
3.OA.A.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	 TM1c Stimulus: The student is presented with a word problem involving measurement quantities such as length, liquid volume, or mass of objects familiar to 8–9 year olds. Example Stem 1: A penny has a mass of 3 grams. What is the mass, in grams, of 4 pennies? Example Stem 2: There are 48 liters of water in a water tank. The water is shared equally into 8 containers. How many liters of water are in each container?
Evidence Required: 1. The student uses multiplication and division within 100 to solve straightforward one-step word problems in situations involving equal groups, arrays, and measurement quantities such as length, liquid volume and masses of objects.	 Example Stem 3: Sarah has 72 inches of string. She cuts the string into pieces that are 9 inches long. How many pieces of string does Sarah have? Rubric: (1 point) The student enters the correct solution (e.g., 12; 6; 8). Response Type: Equation/Numeric
Tools: None	



lask model za	Prompt Features: The student is prompted to identify an
	unknown whole number in a multiplication equation.
Response Type:	
Equation/Numeric	Stimulus Guidelines:
	 Item difficulty can be adjusted via these example
DOK Level 1	methods:
	\circ Unknown is the product.
3.0A.A.4	 Unknown is the second factor.
Determine the unknown	 Unknown is the first factor.
whole number in a	 Product is listed first in equation and unknown is
multiplication or division	first/second factor.
equation relating three	
whole numbers. For	
example, determine the	Stimulus: The student is presented with a multiplication
unknown number that	equation with an unknown factor or product represented by a box
makes the equation true	(□) or <i>?</i> .
In each of the equations $2 \times 2 = 49$ E = $\Box \div 2$	Example Stop 1. What unknown number makes this equation
$0 \times ? = 40, 5 = \Box \div 5,$	
and $0 \times 0 = !$	
Evidence Required:	8 x 🗆 = 56
2 The student	
2. The student	
determines an unknown	Example Stem 2: What unknown number makes this equation
determines an unknown whole number in a	Example Stem 2: What unknown number makes this equation true?
determines an unknown whole number in a multiplication or division	Example Stem 2: What unknown number makes this equation true?
determines an unknown whole number in a multiplication or division equation relating three	Example Stem 2: What unknown number makes this equation true? $63 = \Box \times 7$
determines an unknown whole number in a multiplication or division equation relating three whole numbers with	Example Stem 2: What unknown number makes this equation true? $63 = \Box \times 7$
determines an unknown whole number in a multiplication or division equation relating three whole numbers with single-digit factors	 Example Stem 2: What unknown number makes this equation true? 63 = □ × 7 Example Stem 3: What unknown number makes this equation
determines an unknown whole number in a multiplication or division equation relating three whole numbers with single-digit factors within 100.	 Example Stem 2: What unknown number makes this equation true? 63 = □ × 7 Example Stem 3: What unknown number makes this equation true?
determines an unknown whole number in a multiplication or division equation relating three whole numbers with single-digit factors within 100.	 Example Stem 2: What unknown number makes this equation true? 63 = 0 × 7 Example Stem 3: What unknown number makes this equation true?
determines an unknown whole number in a multiplication or division equation relating three whole numbers with single-digit factors within 100. Tools: None	Example Stem 2: What unknown number makes this equation true? $63 = \Box \times 7$ Example Stem 3: What unknown number makes this equation true? $7 \times 5 = ?$
determines an unknown whole number in a multiplication or division equation relating three whole numbers with single-digit factors within 100. Tools: None	Example Stem 2: What unknown number makes this equation true? $63 = \Box \times 7$ Example Stem 3: What unknown number makes this equation true? $7 \times 5 = ?$
determines an unknown whole number in a multiplication or division equation relating three whole numbers with single-digit factors within 100. Tools: None	Example Stem 2: What unknown number makes this equation true? $63 = \Box \times 7$ Example Stem 3: What unknown number makes this equation true? $7 \times 5 = ?$ Rubric: (1 point) The student correctly identifies the unknown
determines an unknown whole number in a multiplication or division equation relating three whole numbers with single-digit factors within 100. Tools: None	Example Stem 2: What unknown number makes this equation true? $63 = \Box \times 7$ Example Stem 3: What unknown number makes this equation true? $7 \times 5 = ?$ Rubric: (1 point) The student correctly identifies the unknown product (e.g., 7; 9; 35).
determines an unknown whole number in a multiplication or division equation relating three whole numbers with single-digit factors within 100. Tools: None	Example Stem 2: What unknown number makes this equation true? $63 = \Box \times 7$ Example Stem 3: What unknown number makes this equation true? $7 \times 5 = ?$ Rubric: (1 point) The student correctly identifies the unknown product (e.g., 7; 9; 35).
determines an unknown whole number in a multiplication or division equation relating three whole numbers with single-digit factors within 100. Tools: None	Example Stem 2: What unknown number makes this equation true? $63 = \Box \times 7$ Example Stem 3: What unknown number makes this equation true? $7 \times 5 = ?$ Rubric: (1 point) The student correctly identifies the unknown product (e.g., 7; 9; 35). Response Type: Equation/Numeric



Task Model 2b	Prompt Features: The student is prompted to identify an
	unknown whole number in a division equation
Posponso Typo	
Equation /Numoric	Stimulus Guidalinas
Equation/Numeric	The difficulty can be adjusted via these example
DOK Lovel 1	• Item unifically can be aujusted via these example
DOK LEVEL 1	methous:
	• Unknown is the quotient.
3.0A.A.4	• Unknown is the divisor.
Determine the unknown	• Unknown is the dividend.
whole number in a	 Quotient is listed first in equation and unknown is
multiplication or division	dividend.
equation relating three	
whole numbers. <i>For</i>	TM2b
example, determine the	Stimulus: The student is presented with a division equation with
unknown number that	an unknown number represented by either a box (\Box) or "?".
makes the equation true	
in each of the equations	Example Stem 1: What unknown number makes this equation
$8 \times ? = 48, 5 = \Box \div 3,$	true?
and 6 × 6 = ?.	
	$24 \div 4 = ?$
Evidence Required:	
2. The student	Example Stem 2: What unknown number makes this equation
determines an unknown	true?
whole number in a	
multiplication or division	56 ÷ ⊓ = 8
equation relating three	
whole numbers with	Example Stem 3: What unknown number makes this equation
single-digit factors	true?
within 100	
	$\Box \div 7 = 8$
Tools: None	
	Example Stem 4: What unknown number makes this equation
Version 3 Undate:	
Added new Example	
Stem to TM2b	$4 - \pi \div 6$
Stem to mizb	$+ - \Box + 0$
	Rubric: (1 point) The student correctly identifies the unknown
	dividend (e.g. 6, 7, 56, 24)
	Response Type: Equation/Numeric