

Math Screener

Grade Four

Draft – February 2024

Draft February 2024.



Grade Four

The Cowichan Valley Mathematics Assessment has been designed as a common formative assessment and universal screener for our district. Each grade level assessment is based on foundational skills from the prior year. The assessment is also designed to allow educators to use prior grade assessments to identify learning needs of students. The screener questions align directly with the identified foundational skills found in instructional resource documents for each grade. Access the documents here:

https://bit.ly/MathInstructionalResources



The information gained from this tool will serve as a universal screener for our district's tiered instruction model. The data will inform individual, small group, and class instruction. It will also help identify patterns of instructional needs in a class, school or across the district as we work to ensure students master these foundational skills.

Each fall, classroom teachers and school teams will work together to identify each student's strengths and needs with foundational mathematics skills. Teachers are encouraged to administer the assessment in *small sections* during the first eight weeks of the school year.

The Mathematics Assessment has been designed in partnership with teachers across our district with the following foundational principles:

- 1. Aligned with curriculum standards from the previous grade
- 2. First Peoples Principles of Learning
- 3. Assessment with and for our learners; not to our learners

In addition, teachers are invited to paraphrase directions to align with classroom language, use classroom materials (alternate concrete materials, dry erase boards, flash cards), and administer the assessment in small parts.

Each grade level screener is an inventory of skills and does not represent the full, complex set of skills necessary for proficiency in mathematics. Our district's Numeracy Framework provides more in- depth information, instructional resources, and intervention strategies.



The Grade Four assessment is a written response format. Teachers are encouraged to do follow-up interviews when clarification is needed.

Scoring is yes (shows mastery) or no. Where the student is required to provide more than just a numerical answer, some elaborations may be given in the key to help teachers determine mastery.

At this point scores can be collected manually on the provided sheet or entered in an excel spreadsheet also provided. Entry into the dashboard will be available for the Fall of 2024.

This is in draft and feedback is welcome and encouraged. You can use this qr code to provide this feedback.





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Grade Four Math Screener - Fall

Name:	Date:

Number Sense

#	Question
NS1	Write the number your teacher says.
	A B
	C D
NS2	
	What number is shown by the blocks?
NS3	
100	
	What number is shown by the dots below?

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NS4	Order these numbers from least to greatest
	605, 714, 711, 709
	;,;;;
NS5	Zoe said that her fraction is greater than 2/10 but less than 6/10. What might her fraction be?
NS6	What fraction of the shape is shaded?
NS7	8. What fraction of the set is shaded?



Computational Fluency

CF1	Circle the best way to estimate 88 + 61? and describe why you chose that equation.
	80 + 60 = 80 + 70 =
	90 + 60 = 90 + 70 =
CF2	Solve the following question.
	26 + 37 =
CF3	Solve the following question.
	126 + 237 =



CF4	What equation would help you estimate 6	7 – 29 =?
CE5	Solve the following question using two di	fferent strategies. You can use nictures
015	words numbers/symbols	nerent strategies. Tou can use pictures,
	wordd, namberd, dymbold.	
	12 -	- 7 =
	One way I solved the question:	A second way I solved the question:
CF6	Solve the following question.	
	62 -	23 =



CF7	Solve the following question.	
	562 -	423 =
CF8	Solve the following question using two dia words, numbers/symbols.	fferent strategies. You can use pictures,
	3 X	6 =
	One way I solved the question:	A second way I solved the question:



	School District	
CF9	There are 13 kids at the skateboard park.	
	Some of the children are riding skateboar	ds (4 wheels)
	and some of them are using scooters (2 v	vheels).
	How many wheels are there all together?	Show your work.
CF10	Solve the following question using two dia words, numbers/symbols.	fferent strategies. You can use pictures,
	18 ÷	- 3 =
1	One way I solved the question:	A second way I solved the question:



CF11	Some friends shared 36 fun fair tickets. Each person received the same number of tickets.
	How many friends might there have been?
	How many tickets did each friend receive?
	TICKET
CF12	Here is a Splat! problem to solve. If there are 18 dots altogether, how many dots are under the Splat?
	Show how you solved this.



Number Sense – Answer Key – Grade Four

Question #	Answers
NS1	Use these numbers; 78, 113, 40, 906
Source – INA	
NS2	530
Source - INA	
NS3	406
Source - INA	
NS4	605, 709, 711, 714
Source - INA	
NS5	Possible answers: 2/5, 3/10, 4/10, 5/10, 5/20, 6/20, 7/20, 8/20, 9/20, 10/20,
Source - INA	11/20
NS6	Shaded – 3/5
Source - INA	Unshaded – 2/5
NS7	Shaded – 4/7
Source – INA	Unshaded – 3/7



Computational Fluency Answer Key – Grade Four

CF1 Source – INA	90 + 60
CF2 Source - INA	Possible representations could include: Friendly numbers, compensate, place value addition, etc.
	25 + 35 = 60
	60 + 1 + 2 = 63
CF3 Source - INA	Possible representations could include: Friendly numbers, compensate, place value addition, etc.
	100 + 200 = 300
	20 + 30 = 50
	6 + 7 = 13
	300 + 50 + 13 = 363
CF4 Source – INA	70 - 30
CF5 Source - INA	Drawing ten frames, using tally marks, dot images, adding up from the number being subtracted (subtrahend) to the whole (minuend), subtraction by removal, subtraction by comparison.
CF6 Source - INA	Possible representations could include using a number line to add on, subtraction by removal.
	62 - 22 = 40
	40- 1 = 39
CF7 Source - INA	Possible representations could include using a number line to add on, subtraction by removal.
	562 - 400 = 162
	162 - 23 = 139



CF8	Groups of, arrays and repeated addition.
Source - INA	
	6 + 6 + 6 = 18
	Look for invented flexible, efficient strategies.
	Students may compose a story- problem context to represent thinking visually
CF9	Sample solution: (many other possibilities)
Source - INA	
	13 people. 3 people are riding scooters and the other 10 are riding skateboards.
	3 X 2 = 6
	10 X 4 = 40
	40 + 6 = 46 wheels
CE10	Draw an array or repeated subtraction groups of number line bar model
0110	Draw an array of repeated Subtraction, groups of, number line, bar model
Source - INA	
Source - INA	
Source - INA CF11	Look for invented flexible, efficient strategies.
Source - INA CF11 Source - INA	Look for invented flexible, efficient strategies.
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Source - INA CF11 Source - INA	Look for invented flexible, efficient strategies. The story-problem contexts can help students make sense of division. In this situation student knows the number of tickets and is to represent fair shares. Possible answers: 4 friends with 9 tickets each. 3 friends with 12 tickets each.
Source - INA CF11 Source - INA	Look for invented flexible, efficient strategies. The story-problem contexts can help students make sense of division. In this situation student knows the number of tickets and is to represent fair shares. Possible answers: 4 friends with 9 tickets each. 3 friends with 12 tickets each.
Source - INA CF11 Source - INA	Look for invented flexible, efficient strategies. The story-problem contexts can help students make sense of division. In this situation student knows the number of tickets and is to represent fair shares. Possible answers: 4 friends with 9 tickets each. 3 friends with 12 tickets each. 2 friends with 18 tickets each. 6 friends with 6 tickets each
Source - INA CF11 Source - INA CF12	Look for invented flexible, efficient strategies. The story-problem contexts can help students make sense of division. In this situation student knows the number of tickets and is to represent fair shares. Possible answers: 4 friends with 9 tickets each. 3 friends with 12 tickets each. 2 friends with 18 tickets each. 6 friends with 6 tickets each Answer - 15
Source - INA CF11 Source - INA CF12 Source -	Look for invented flexible, efficient strategies. The story-problem contexts can help students make sense of division. In this situation student knows the number of tickets and is to represent fair shares. Possible answers: 4 friends with 9 tickets each. 3 friends with 12 tickets each. 2 friends with 18 tickets each. 6 friends with 6 tickets each Answer - 15