Wisconsin Forward Exam

WISCONSIN DEPARTMENT OF
Public Instruction

Mathematics Item Sampler Grade 4

Answer the items below.

1. Demarcus worked on his science project for 3 hours. For how many **minutes** did he work on his project?

A. 60

B. 63

C. 120

D. 180

2. The table shows the fraction of each project several students have completed.

Student	Math Project	Reading Project
Aaron	$\frac{4}{5}$	$\frac{2}{8}$
Bonnie	$\frac{2}{5}$	$\frac{7}{8}$
Cam	$\frac{4}{8}$	$\frac{4}{5}$
Drea	$\frac{1}{8}$	$\frac{3}{8}$

Which student has completed more of his/her math project than his/her reading project?

A. Aaron

B. Bonnie

C. Cam

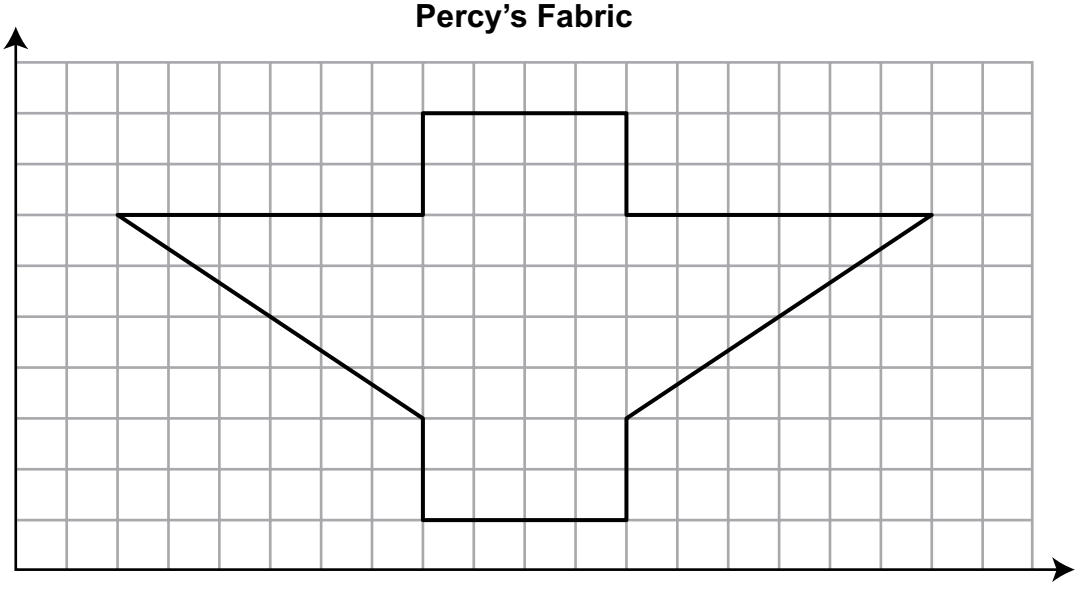
D. Drea

Go on to the next page.

3. Catherine is solving the number statement "48 is 6 times as many as __." What number goes in the blank to solve the number statement?

4. Percy cuts out a piece of fabric in the shape shown on the grid. He folds the fabric in half so both halves match. Draw a line across the shape to show where Percy folds the fabric.

Percy's Fabric



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5. What is $3\frac{1}{4} - 1\frac{2}{4}$?

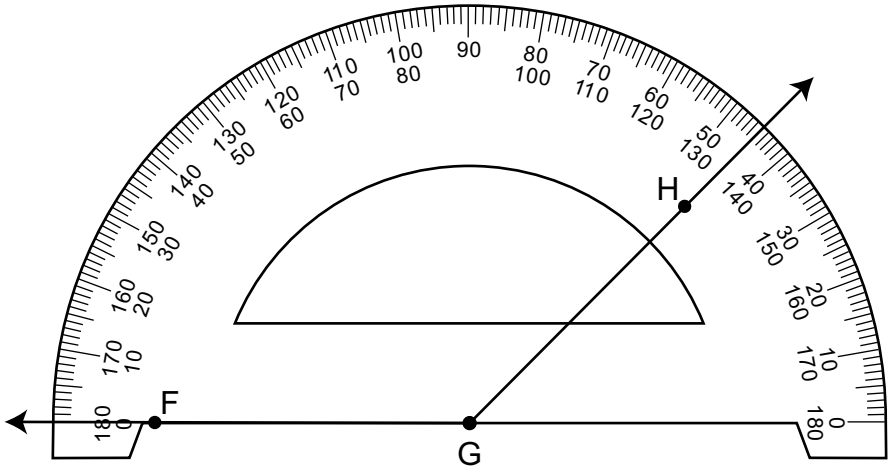
A. $1\frac{3}{4}$

B. $2\frac{1}{4}$

C. $2\frac{3}{4}$

D. $4\frac{3}{4}$

6. A protractor is used to measure angle FGH.



What is the measure of angle FGH?

A. 45°

B. 55°

C. 135°

D. 145°

Go on to the next page.

7. Yuri scored 3,670 points in a video game. Amelia scored three thousand seven hundred forty-five points in the same game. Use <, >, or = to compare Yuri's and Amelia's scores.

8. Peter is listing all the factors of 72. Which factor pair should be included on his list?

A. 2×70

B. 4×18

C. 7×9

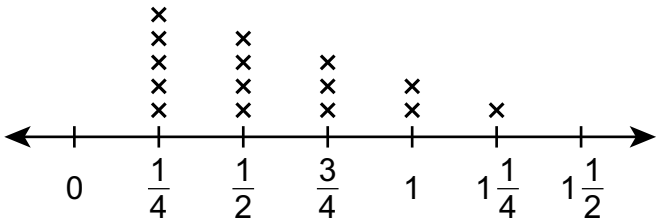
D. 7×12

STOP.

STOP.

Answer the items below.

1. Several cities recorded the amount of rainfall during a recent rainstorm.



Amount of Rainfall (inches)

What is the total amount of rainfall, in inches, that fell in all of the cities?

A. $1\frac{1}{4}$

B. $3\frac{3}{4}$

C. $8\frac{3}{4}$

D. 15

2. What is 3,805 – 678?

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3. Julie creates a number pattern that starts with 3 and uses the rule "add 7." Which statement about Julie's number pattern is correct?

A. All of the numbers in the pattern will be odd.

B. All of the numbers in the pattern will be even.

C. The numbers in the pattern will alternate between odd and even.

D. The first number in the pattern will be odd but the rest will be even.

4. Write the sum of $\frac{43}{100} + \frac{2}{10}$ as a fraction.

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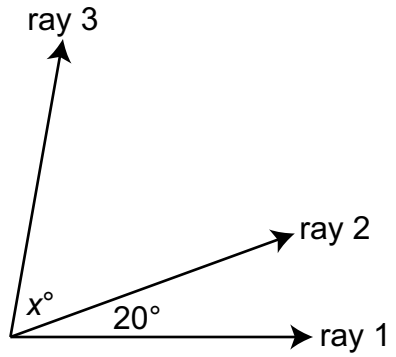
6. An angle is shown.



The measure of the angle formed by ray 1 and ray 3 is 80°.

Use the numbers, variables, and symbols below the blank lines to make an equation that could be used to find the value of *x*.

_____	_____	_____	=	_____
0	+	0		0
20	-	20		20
80	×	80		80
x	÷	*x*		*x*

7. Jackson's hometown has a population of 145,289. What is the population of Jackson's hometown when rounded to the nearest thousand?

A. 145,000

B. 145,300

C. 146,000

D. 150,000

STOP.

STOP.

SUMMARY DATA

Grade 4

Sample Number	Alignment	Answer Key	Depth of Knowledge	Annotations
Session 1				
1	4.MD.1	D	2	The question asks the student to convert hours to minutes. A. Incorrect. The student uses the number of minutes in 1 hour. B. Incorrect. The student adds 60 plus 3. C. Incorrect. The student uses the number of minutes in 2 hours. D. Correct. The student multiplies 60 times 3.
2	4.NF.2	A	2	The question asks the student to compare fractions with like and unlike denominators. A. Correct. The student compares $\frac{4}{5}$ and $\frac{2}{8}$ to $\frac{1}{2}$. B. Incorrect. The student thinks the larger fraction has fewer parts of the whole. C. Incorrect. The student thinks the larger fraction has more parts of the whole. D. Incorrect. The student uses a greater fraction for the reading project than the math project.
3	4.OA.1	Exemplar: 8	1	The question asks the student to find the missing number in a verbal statement. To receive full credit, the student must enter 8 or an equivalent value.

Grade 4

Sample Number	Alignment	Answer Key	Depth of Knowledge	Annotations
4	4.G.3	See Annotations	1	The question asks the student to create a line of symmetry. To receive full credit, the student must draw a line down the center of the figure.
5	4.NF.3c	A	1	The question asks the student to subtract mixed numbers. A. Correct. The student subtracts $\frac{13}{4}$ minus $\frac{6}{4}$ and converts the difference to a mixed number. B. Incorrect. The student subtracts the whole numbers and then subtracts the fractions backwards. C. Incorrect. The student does not subtract from the whole number when borrowing. D. Incorrect. The student adds the fractions.
6	4.MD.6	C	1	The question asks the student to use a protractor to measure an angle. A. Incorrect. The student reads the protractor from right to left and adds 5 to 40. B. Incorrect. The student reads the protractor from right to left and adds 5 to 50. C. Correct. The student reads the protractor from left to right. D. Incorrect. The student reads the protractor from left to right and adds 5 to 140.

Grade 4

Sample Number	Alignment	Answer Key	Depth of Knowledge	Annotations
7	4.NBT.2	$3670 < 3745$ or $3745 > 3670$	1	The question asks the student to compare two numbers. To receive full credit, the student must enter $3670 < 3745$ or $3745 > 3670$.
8	4.OA.4	B	1	The question asks the student to find factors of a number. A. Incorrect. The student adds 70 and 2 to get 72. B. Correct. The student multiplies 4 and 18 to get 72. C. Incorrect. The student incorrectly multiplies 7 and 9. D. Incorrect. The student multiplies 7 and 10 to get 70, and adds 2 from the 12.
Session 2				
1	4.MD.4	C	2	The question asks the student to use information from a line plot. A. Incorrect. The student adds the column with the greatest number of marks. B. Incorrect. The student adds $\frac{1}{4} + \frac{1}{2} + \frac{3}{4} + 1 + 1\frac{1}{4}$. C. Correct. The student adds all the amounts of rainfall from the line plot. D. Incorrect. The student uses the number of cities that were recorded in the line plot.

Grade 4

Sample Number	Alignment	Answer Key	Depth of Knowledge	Annotations
2	4.NBT.4	Exemplar: 3127	1	The question asks the student to subtract two numbers. To receive full credit, the student must enter 3127 or an equivalent value.
3	4.OA.5	C	2	The question asks the student to use a rule for a number pattern. A. Incorrect. The student uses odd numbers only. B. Incorrect. The student uses the two odd numbers to create an even number and applies the observation to the entire pattern. C. Correct. The student observes the pattern 3, 10, 17, 24, … D. Incorrect. The student uses the second number in the pattern as the observation for the entire pattern.
4	4.NF.5	Exemplar: $\frac{63}{100}$	1	The question asks the student to add two fractions with unlike denominators. To receive full credit, the student must enter $\frac{63}{100}$ or an equivalent fraction.

Grade 4

Sample Number	Alignment	Answer Key	Depth of Knowledge	Annotations
5	4.G.3	B	1	The question asks the student to identify a shape with no lines of symmetry. A. Incorrect. The student assumes shapes with diagonal sides have no lines of symmetry. B. Correct. The student understands the shape does not have a line of symmetry. C. Incorrect. The student does not see the horizontal line of symmetry. D. Incorrect. The student thinks the shape has too many sides to be able to have any lines of symmetry.
6	4.MD.7	Exemplar: $20 + x = 80$	2	The question asks the student to create an equation that can be used to find the value of x. To receive full credit, the student must create the equation $20 + x = 80$ (or an equivalent equation).
7	4.NBT.3	A	1	The question asks the student to round a number to the nearest thousands place. A. Correct. The student rounds down to the nearest thousands place. B. Incorrect. The student rounds up to the nearest hundreds place. C. Incorrect. The student rounds up to the nearest thousands place. D. Incorrect. The student rounds up to the nearest ten thousands place.