Sample Current Final Average Computation for Numeric and Letter Configurations using proportional option.

Overview

The help topic gives four examples to help explain how the grade book calculates the Current Final Average under different configurations. Below is a quick look at the formulas used for Current Final Average, followed by a discussion of some key concepts you should understand, and then the aforementioned examples.

 In addition to this help topic, separate <u>Numeric Configuration</u> and <u>Letter Configuration</u> targeted versions of the Sample Current Final Average help topic are available.

NOTE

• Beneath the teacher's Summary grid you will find a "*Click here to view Averaging Rules for this class*" link which lists the administrator's settings for computing averages. Viewing those rules will be helpful if a student's average is blank. Also, that information may be helpful when calculating a student's average by hand with this help topic.

A Quick Look at the Current Final Average Calculation:

In this section, you will find an abbreviated look at how a Current Final Average calculation works. This section is provided for those of you who want a quick look at the numbers. Everything will be described in more detail later in this document.

When All Marking Periods are Closed: The example below shows how a Current Final Average would be calculated using a 4 quarter system, a numeric grading system, and **all marking periods are closed when the computation is run**.

• You would begin by computing the Weighted Points for each marking period. This is accomplished by taking the *Grade* that the student earned and multiplying it by the relative *Marking Period Weight*. The result is the *Weighted Points* column below. (Marking Period Weights are manually set school-wide by the grade book administrator. In some cases, teachers will set the weights.)

Marking Period	Grade		Marking Period Weight		Weighted Points
Q1	92	X	1.00	=	92
Q2	89	X	1.00	=	89
MEX	84	X	0.50	=	42
Q3	94	X	1.00	=	94
Q4	90	X	1.00	=	90
FEX	85	X	0.50	=	42.5
Totals			5.00		449.5

 The Current Final Average is determined by dividing the sum of the Weighted Points by the sum of Weights:

Current Final Average = <u>449.5</u> = 89.9

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When One Marking Period is Open: The grade book weighs an open marking period proportionally by determining an additional weighting factor. In the table that follows, the Weighting Factor column shows the values used by the grade book. Open marking periods are scaled proportionally based on the Total Points assigned to-date versus the Total Points assigned to other closed marking periods. Exam marking periods are not considered as there are no assignments involved. The full marking period weight is given to all of the **Closed marking periods**, and to any exam or semester average marking periods.

• **Determining the Weighting Factor for the Open Marking Period**: To determine the Weighting

Factor for the open marking period Q3, do the following. Sum the Total Points available for graded assignments from each of the closed quarter marking periods, and divide by the number of closed marking periods:

(250+280)/2= 265.

Divide QT3's Total Points available to-date by 265.

Marking Period	Open/Closed	Total Points	Marking Period Weight	Weighting Factor
Q1	Closed	250	1.00	1.00
Q2	Closed	280	1.00	1.00
MEX	Closed	85	0.50	1.00
Q3	Open	50	1.00	0.19
Q4	Not Started		1.00	
FEX	Not Started		0.50	

50/265 = 0.19 which will be the Weighting Factor used for Q3.

Before we can determine the Current Final Average, we will need to determine the Weighted Points and the Divisor.

- We will begin by determining the Weighted Points. Multiply the student's *Grade* by the *Marking Period Weight* by the *Weighting Factor* column. The result is the *Weighted Points* column in the table below.
- Next, we'll need to determine the Divisor. The divisor for the open marking period, Q3, is weighted proportionally. So, copy the value of 0.19 from the *Weighting Factor* column to the *Divisor* column. The closed marking periods Q1, Q2, and MEX receive their full weight in the divisor, so simply copy the value from the *Marking Period Weight* column to the *Divisor* column.

Marking Period	Open/Closed	Grade		Marking Period Weight		Weighting Factor		Weighted Points	Divisor
Q1	Closed	90	X	1.00	X	1.00	=	90.0	1.00
Q2	Closed	90	X	1.00	X	1.00	=	90.0	1.00
MEX	Closed	85	X	0.50	X	1.00	=	42.5	0.50
Q3	Open	70	X	1.00	X	0.19	=	13.3	0.19
Q4	Not Started			1.00					
FEX	Not Started			0.50					
Total								235.8	2.69

• **Determining the Proportional Current Final Average**: To determine the Current Final Average for the student, take the sum of the *Weighted Points* column and divide it by the sum of the *Divisor* column:

235.8/2.69 = 87.6579

• Current Final Average = 87.66.

Key Concepts

Below, we will discuss some key concepts you should understand.

Letter Grades

When your grade book is configured to use Letter grades, only a letter grade (such as A+, A, A-) is recorded for each marking period in a student's record. All Current Final Average computations for letter grades are therefore based on the grade point value of those grades. For example, an A+ may be worth 4.3 grade points. Before you begin a hand calculation using letter grades, you need to know the grade point value that corresponds to each letter grade. Below is a sample Grade Table:

Grade Table

Grade	Grade Point Value
A+	4.3
А	4.0
A-	3.7
B+	3.3



Relative Weighting of Marking Periods:

When the Current Final Average is computed, it uses the weight assigned to each marking period relative to the other marking periods used. Often, an exam marking period holds less weight in the Current Final Average than a term marking period. The administrator will define a default set of relative weights before teachers begin using the grade book. The administrator also has the option to grant teachers permission to adjust these relative weights, on a course-by-course basis. Below is a sample relative weighting scheme where an Exam grade is worth half the weight of a Quarterly grade. The administrator may use any range of values for the weights. It is the weight of one marking period relative to another that counts.

Marking Period	Weight
Q1- Quarter 1	1.00
Q2 - Quarter 2	1.00
MEX - Midyear Exam	0.50
Q3 - Quarter 3	1.00
Q4 - Quarter 4	1.00
FEX - Final Exam	0.50

Unrounded Averaging for Only Numeric Grading Configurations

The MMS Web Portals includes an Unrounded Averaging capability for those who have the grade book configured for numeric grading. The Unrounded Averaging feature is not applicable for those who have the grade book configured for letter grading. The grade book stores both an unrounded value and a rounded value for each marking period. As edits to either assignments or to the marking period grade itself are made, both the rounded and unrounded values are updated. An extra degree of precision is available through the use of the MMS teacher grade book when Unrounded Averaging is enabled. The teacher grade book will calculate and store both a rounded marking period grade (e.g., '89' - the grade that appears on the report card) and an unrounded marking period average (e.g., '88.7915' - this grade does not appear on the report card). Grade book averaging operations for Current Final Average and for semester and final averages are then based on the unrounded marking period average. (Refer to the "Current Final Average Overview" for additional explanation of how Unrounded Averaging is used by the grade book.)

In some instances, the use of Unrounded Averaging may result in a student's Semester or Final Average grade either going up or down by a point (refer to the "*Numeric Grading Example #1: Differences Between Unrounded & Rounded Averages*" section later in this document).

How Open Marking Periods Change the Computation:

A marking period may be considered open, closed or not started. An "Open" marking period is the marking period in progress -- the marking period has started. A marking period is "Closed" once grades have closed for that marking period. A marking period has "Not Started" if the start date of the marking period is in the future.

When all marking periods are Closed: When all marking periods used for Current Final Average are closed, computing the averages is straightforward. The grade for each marking period is assigned the face value of its relative weight (described above). When the teacher computes the <u>actual final average</u> through Final Grade Entry screen, then all marking periods are considered to be closed regardless of date.

When at least One marking period is Open: Current Final Average computation assigns a proportional weight to any marking period that is still open. To take the simplest example, assume that Current Final Average is based on 4 quarter grades, each of equal weight:

Marking Period	Weight
Q1	1.00
Q2	1.00
Q3	1.00
Q4	1.00

Assume that 2 weeks into quarter 4 a student has the following grades:

Marking Period	Weight
Q1	88
Q2	92
Q3	90
Q4	78

If the Q4 grade were assigned its full weight, the student would have a Current Final Average of 87. However, because Q4 is still open, the Current Final Average computation weights it proportionally. This prevents a bad week or two from disproportionately affecting a student's Current Final Average.

The grade book assigns a proportional weighting factor to any open marking period as follows:

Weighting Factor=	Total Points to-date in Open Marking Period
	Average of Total Points in Closed Marking Period

• Closed marking periods, and any exam or semester average marking periods always receive the full marking period weight (in the marking period/weight table above that would mean a value of 1.00).

For an example of this, assume a numeric, 4 quarter system is used. Current Final Average is being computed for a class early in Q3. During Q1, the Total Points for all assignments was 250; during Q2, the Total Points for all assignments was 280. In Q3 to-date, the Total Points for graded assignments is 50. The weighting Factor for Q3 is calculated as follows:

NOTE

Total Points -- For "Total Points", please use the value shown in the teacher grade book's *Total Points* column for each marking period. For Total Points, the grade book sums the maximum point value of each assignment in the marking period and ignores any assignments that are Extra Credit, Exempt, or Dropped for that student.

- 1. Sum the Total Points available for all assignments in each completed marking period (250+280=530).
- 2. Divide the sum from the prior step (530) by the number of closed marking periods (2): 530/2=265. You now have the average total points for the closed marking periods: 265.
- 3. Divide the student's Total Points available in the open Q3 marking periods (50) by the average total points (265): 50/265=0.19. The proportionate weight for the open Q3 marking period is 0.19 relative to the 1.00 weight given to the closed marking periods.

Weighting Factor=	<u>50</u> 265	=0.19
	Average of Total Points in	Closed marking period
Weighting Factor=	<u>Total Points to-date in (</u>	<u> Dpen marking period</u>
Total Points in Q3:	50	
Average Total Points Q1+Q2:	265	
Total Points in Q2:	280	
Total Points in Q1:	250	

4. This additional Weighting Factor is explained further in the examples that follow. Example #2 discusses an open marking period with a numeric grading system. Example #4 discusses an open marking period with a letter grading system.

Examples

The second example shows how Current Final Average is computed when all marking periods are closed for a numeric-based grading system. The third example shows how Current Final Average is computed when one marking period is still in progress for a numeric-based grading system. The third example shows how Current Final Average is computed when all marking periods are closed for a letter-based grading system. The third example shows how Current Final Average is computed when one marking period is still in progress for a closed for a letter-based grading system. The third example shows how Current Final Average is computed when one marking period is still in progress for a letter-based grading system.

Numeric Grade Examples

Current Final Average

Overview

Rounded Averaging:

Marking Period	Rounded Grade		Marking Period Weight		Weighted Points
Quarter 1	83	Χ	1	=	83
Quarter 2	77	Χ	1	=	77
Midyear Exam	63	Χ	0.5	=	31.5
Totals			2.5		191.5

Rounded MAV = <u>191.5</u> = 76.6 = 77

2.5

The Current Final Average stored is a whole number that is rounded up at the midpoint.

Unrounded Averaging:

Marking Period	Unrounded Grade		Marking Period Weight		Weighted Points
Quarter 1	82.89	Χ	1	=	82.89
Quarter 2	76.64	Χ	1	=	76.64
Midyear Exam	63	Χ	0.5	=	31.50
Totals			2.5		191.03

Unrounded MAV = <u>191.03</u> = 76.41 = 76

2.5

The Current Final Average stored is a whole number that is rounded up at the midpoint.

Example #2 All marking periods Closed using a Numeric Grade System:

The example below shows how a Current Final Average would be calculated using a 4 quarter system, a numeric grading system, and all marking periods are closed when the computation is run.

(**Note:** All marking periods are Closed in this example. Example #2 discusses how an open marking period changes the Current Final Average calculation.)

• Depending on the Administrator's configuration of the grade book, either Unrounded Averaging, or Rounded Averaging is used. Refer to the "View Averaging Rules for this Class" link beneath the teacher's

Summary grid, which will indicate whether unrounded or rounded averaging is currently configured. If Unrounded Averaging is used, the unrounded marking period grade will be used with up to a four decimal place accuracy when computing both the Current Final Average and the actual semester or final average. If unrounded averaging is used, replace the whole number marking period grades shown in the example with values containing up to four decimal places. The student marking period grade with decimal place accuracy is shown on the teacher Summary grid and through the Student Progress Report.

1. You would begin by computing the Weighted Points for each marking period. Take the *Grade* that the student earned and multiply it by the relative *Marking Period Weight*. The result is the *Weighted Points* column below.

Marking Period	Grade		Marking Period Weight		Weighted Points
Q1	92	X	1.00	=	92
Q2	89	X	1.00	=	89
MEX	84	X	0.50	=	42
Q3	94	X	1.00	=	94
Q4	90	X	1.00	=	90
FEX	85	X	0.50	=	42.5
Totals			5.00		449.5

2. Sum the Weight column -- 5.00. Sum the Weighted Points column -- 449.5.

3. The Current Final Average is determined by dividing the sum of the Weighted Points by the sum of Weights:

Current Final Average = <u>449.5</u> = 89.9 =90

5

The Current Final Average stored is a whole number that is rounded up at the midpoint.

There can be many variations, with special handling for letter grades (e.g., Pass/Fail, Incomplete and Medical), but the basic model stays the same. A weight is assigned to each marking period, and the average is computed by applying the weight to the grade for that marking period.

Example #3 One Open marking period using a Numeric Grade System:

The grade book weighs an open marking period proportionally by determining an additional weighting factor. In the table beneath step #1, the Weighting Factor column shows the values used by the grade book. Closed marking periods, and any exam or semester average marking periods always receive the full Weighting Factor (in this case a 1.00). Open marking periods are scaled proportionally based on the total points assigned to-date versus the total points assigned to other closed marking periods. This is done so that the grade in a marking period that is not yet complete does not carry the same weight as a grade for a completed marking period. It is important to remember that when one or more marking periods remain open, the Current Final Average is only an estimation of what the student's actual Final Average will be.

- Depending on the Administrator's configuration of the grade book, either Unrounded Averaging, or Rounded Averaging is used. Refer to the "View Averaging Rules for this Class" link beneath the teacher's Summary grid, which will indicate whether unrounded or rounded averaging is currently configured. If Unrounded Averaging is used, the unrounded marking period grade will be used with up to a four decimal place accuracy when computing both the Current Final Average and the actual semester or final average. If unrounded averaging is used, replace the whole number marking period grades shown in the example with values containing up to four decimal places. The student marking period grade with decimal place accuracy is shown on the teacher Summary grid and through the Student Progress Report.
- 1. **Determining the Weighting Factor for the Open Marking Period**: To determine the Weighting Factor for the open marking period Q3, do the following. Sum the Total Points available for graded assignments from each of closed quarter marking periods (the final grade entry marking periods MEX and FEX are excluded because no assignments are involved). You get the *average Total Points* by dividing the total by the number of closed marking periods:

(250+280)/2= 265.

Divide QT3's Total Points available to-date by 265.

50/265 = 0.19

The value of 0.19 is the *Weighting Factor* used for Q3. For all of the other marking periods, a full *Weighting Factor* (in this case a 1.00) is given.

NOTE

Total Points -- For "Total Points", please use the value shown in the teacher grade book's *Total Points* column for each marking period. For Total Points, the grade book sums the maximum point value of each assignment in the marking period and ignores any assignments that are Extra Credit, Exempt, or Dropped for that student.

Marking Period	Open/Closed	Total Points	Marking Period Weight	Weighting Factor
Q1	Closed	250	1.00	1.00
Q2	Closed	280	1.00	1.00
MEX	Closed	n/a	1.00	1.00
Q3	Open	50	1.00	0.19
Q4	Not Started		1.00	
FEX	Not Started		0.50	

- 2. Empty term, semester, or exam grade fields are ignored by the Current Final Average computation if those marking periods are still open or have *Not Started*. The Current Final Average calculation will automatically ignore the empty grade field and its weight, and compute an average based on the remaining grades and weights. The only time that an empty grade field rule setting will apply to a Current Final Average calculation is when a student has an empty grade field for a marking period that is now closed. So, we will ignore the empty Q4 and FEX marking periods for all steps that follow.
- 3. **Determining the Weighted Points and Divisor**: Before we can determine the Current Final Average, we will need to determine the *Weighted Points* and the *Divisor*.
 - We will begin by determining the weighted points values for Q1, Q2, MEX, and Q3. This will be done by multiplying the student's *Grade* by the *Marking Period Weight* column, by the *Weighting Factor* column. The result for each row is stored in the *Weighted Points* column in the table below. The *Marking Period Grade* column below is the quarter or exam average that the student earned.
 - Next, we'll need to determine the divisor. To do this, we multiply the *Marking Period Weight* column by the *Weighting Factor* column, and place the result in the *Divisor* column.

Marking Period	Open/Closed	Grade		Marking Period Weight		Weighting Factor		Weighted Points	Divisor
Q1	Closed	90	X	1.00	X	1.00	=	90.0	1.00
Q2	Closed	90	X	1.00	X	1.00	=	90.0	1.00
MEX	Closed	85	X	0.50	X	1.00	=	42.5	0.50
Q3	Open	70	X	1.00	X	0.19	=	13.3	0.19
Q4	Not Started			1.00					
FEX	Not Started			0.50					
Total								235.8	2.69

4. **Determining the Proportional Current Final Average**: To determine the Current Final Average for the student, we will take the sum of the *Weighted Points* column and divide it by the sum of the *Divisor* column:

235.8/2.69 = 87.6579

The Current Final Average stored is a whole number that is rounded up at the midpoint.

Current Final Average = 88

Letter Grade Examples

Example #3 All Marking Periods Closed Using a Letter Grade System:

The example below shows how a Current Final Average would be calculated for letter grade schools with 6 terms when all marking periods are closed. The same general process as described in the prior examples follows. For letter grades, however, some additional steps and information are required in order to calculate the Current Final Average.

(**Note:** All marking periods are Closed in this example. Example #4 discusses how an open marking period changes the Current Final Average calculation.)

1. Letter grades (A+, A, A-) are stored in the term marking periods for each student. Before you begin, you need to know the grade point value for each letter grade. Below is a sample Grade Table where a letter grade of A+ is worth 4.3 grade points.

Grade Table

Grade	Grade Point Value
A+	4.3
А	4.0
A-	3.7
B+	3.3
В	3.0

2. You would begin by computing the *Weighted Points* for each marking period. Take the *Grade Point Value* of the letter grade and multiply it by the *Marking Period Weight*. The result shown is the *Weighted Points* column below.

Marking Period	Letter Grade	Grade Point Value		Marking Period Weight		Weighted Points
T1	A+	4.3	X	1.00	=	4.30
T2	А	4.0	X	1.00	=	4.00
Т3	B+	3.3	X	1.00	=	3.30
MEX	A+	4.3	X	0.50	=	2.15
T4	A-	3.7	X	1.00	=	3.70
Т5	А	4.0	X	1.00	=	4.00
Т6	B+	3.3	X	1.00	=	3.30
FEX	А	4.0	X	0.50	=	2.00
Totals				7.00		26.75

3. Sum the *Weight* column -- 7.00. Sum the *Weighted Points* column -- 26.75.

4. The Current Final Average is determined by dividing the sum of the *Weighted Points* by the sum of the *Weights*:

Current Final Average = <u>26.75</u> = 3.8214 7

5. The last step is to consider the rounding rule when calculating averages using grade points. The grade book needs to assign a letter grade for the Current Final Average, so it needs to find the letter grade equivalent of 3.8214. Depending on your school's rules, the grade book will choose the letter grade to assign for this student's Current Final Average by either rounding it down, rounding it up, or rounding it to the closest value.

Using the sample Grade Table shown above, you can see that:

- rounded down, the average would be 3.7, for an A-.
- rounded up, the average would be 4.0, for an A.
- rounded to the closed value, the average would be 3.7, for an A-.

NOTE

If you are unsure of the setting of the rounding rule, click the "Click here to view Averaging Rules for this class" link beneath the summary grid for the course. The information shown includes the administrator's setting for the rounding rule.

Example #4 One Open marking period using a Letter Grade System:

The grade book weighs an open marking period proportionally by determining an additional weighting factor. In the table beneath step #1, the Weighting Factor column shows the values used by the grade book. Closed marking periods, and any exam or semester average marking periods always receive the full Weighting Factor (in this case a 1.00). Open marking periods are scaled proportionally based on the total points assigned to-date versus the total points assigned to other closed marking periods. This is done so that the grade in a marking period that is not yet complete does not carry the same weight as a grade for a completed marking period. It is important to remember that when one or more marking periods remain open, the Current Final Average is only an estimation of what the student's actual Final Average will be.

1. **Determining the Weighting Factor for the Open marking period**: To determine the *Weighting Factor* for the open marking period T4, do the following. Sum the *Total Points* to the student from each of the closed marking periods. Final Grade Entry marking periods (e.g., MEX, FEX) are not included when determining the weighting factor, as there are no assignments involved. You get the *average Total Points* by dividing the total by the number of closed marking periods:

(310+350+325)/3= 328.3.

Divide T4's Total Points available to-date by 328.3.

120/328.3 = 0.37

The value of 0.37 is the *Weighting Factor* used for T4. For all of the other marking periods, a full *Weighting Factor* (in this case a 1.00) is given.

NOTE

Total Points -- For "Total Points", please use the value shown in the teacher grade book's *Total Points* column for each marking period. For Total Points, the grade book sums the maximum point value of each assignment in the marking period and ignores any assignments that are Extra Credit, Exempt, or Dropped for that student.

Marking Period	Open/Closed	Total Points	Marking Period Weight	Weighting Factor
T1	Closed	310	1.00	1.00
T2	Closed	350	1.00	1.00
Т3	Closed	325	1.00	1.00
MEX	Closed	n/a	n/a	n/a
T4	Open	120	1.00	0.37
T5	Not Started		1.00	
Т6	Not Started		1.00	
FEX	Not Started		0.50	

2. Letter grades (A+, A, A-) are stored in the term marking periods for each student. You need to know the grade point value that corresponds to each letter grade. Below is both the student's grade record and the Grade Table.

The Student's Grade Record:				Grade Table			
Marking Period	Open/Closed	Grade	Grade Points	Grade	Grade Point Value		
T1	Closed	B+	3.3	A+	4.3		
T2	Closed	A+	4.3	A-	37		
Т3	Closed	A	4.0	R+	33		
MEX	Closed	A-	3.7	B.	3.0		
T4	Open	В	3.0		3.0	•	
T5	Not Started						
T6	Not Started						
FEX	Not Started						

3. An empty term, semester, or exam grade fields are ignored by the Current Final Average computation if those marking periods have *Not Started*. The CFA calculation will automatically ignore the empty grade field and its weight, and compute an average based on the remaining grades and weights. The only time that an empty grade field rule setting will apply to a CFA calculation, is when a student has an empty grade field for a marking period that has both occurred and it is now closed. So, we will ignore the empty T5, T6, and FEX marking periods for all steps that follow.

- 4. Determining the Weighted Points and Divisor: Before we can determine the Current Final Average, we will need to determine the Weighted Points and the Divisor.
 - We will begin by determining the weighted points values for T1, T2, T3, MEX, and T4. This will be done by multiplying the *Grade Points* of the letter grade by the *Marking Period Weight* column, by the *Weighting Factor* column. The result for each row is stored in the *Weighted Points* column in the table below. The *Grade Points* column below is the grade point value of the term or exam average that the student earned.
 - Next, we'll need to determine the divisor. To do this, we multiply the *Marking Period Weight* column by the *Weighting Factor* column, and place the result in the *Divisor* column.

Marking Period	Open/Closed	Grade Points		Marking Period Weight		Weighting Factor		Weighted Points	Divisor
T1	Closed	3.3	X	1.00	X	1.00	=	3.3	1.00
T2	Closed	4.3	X	1.00	X	1.00	=	4.3	1.00
Т3	Closed	4.0	X	1.00	X	1.00	=	4.0	1.00
MEX	Closed	3.7	X	0.50		n/a	=	1.85	0.50
T4	Open	3.0	X	1.00	X	0.37	=	1.11	0.37
T5	Not Started			1.00					
Т6	Not Started			1.00					
FEX	Not Started			0.50					
Total								14.56	3.87

5. **Determining the Proportional Current Final Average**: To determine the proportional Current Final Average for the student, we will take the sum of the *Weighted Points* column and divide it by the sum of the *Divisor* column:

14.56/3.87 = 3.7622

Current Final Average = 3.76

6. The last step is to consider the rounding rule when calculating averages using grade points. The grade book needs to assign a letter grade for the Current Final Average, so it needs to find the letter grade equivalent of 3.7622. Depending on your school's rules, the grade book will choose the letter grade to assign for this student's Current Final Average by either rounding it down, rounding it up, or rounding it to the closest value.

Using the sample Grade Table shown above, you can see that:

- rounded down, the average would be 3.7, for an A-.
- rounded up, the average would be 4.0, for an A.
- rounded to the closed value, the average would be 3.7, for an A-.

NOTE

If you are unsure on the setting of the rounding rule, click the "Click here to view Averaging Rules for this class" link beneath the summary grid for the course. The information shown includes the administrator's setting for the rounding rule.

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