How To Round Unit Prices With Advanced Pricing

By Lisa Coble, Carolina Biological

Editor’s Note: This tip is one that will go directly into our Advanced Pricing Mastery Level Workshop as a featured tip. I’ve been aware of the fact that you could manipulate Advanced Pricing to round prices, but never really figured out how to do it. We think you’ll agree, this is a winner and a great illustration of how JDEtips helps you solve business problems without expensive customization.

A large percentage of our company’s sales is based on orders that originate from sales quotes/bids. JDE’s functionality allows us to enter a sales quote, generate a printed quote document, and finally, if applicable, convert this quote into a sales order. Because JDE uses four decimals on unit price, and our Formscape printing software rounds the unit price to the nearest penny, there are instances when, based on the quantity ordered, the unit price does not reflect the price the system assigned, creating unit price and extended price inconsistencies.

First, we’ll show you how we rounded prices to the nearest penny, and then we’ll take that solution and extend it to rounding to the nearest $.10 and nearest $1.00.

After entering the sales quote, choose Check Price from the Row Exit bar. This example shows that the only active adjustment is called BASE. The current base price of $79.86 is displayed both on the order line and in the Price Adjustment History.

Figure 1: Price History
How To Round Unit Prices
With Advanced Pricing

In Sales Order Entry, we are using the Price Code 3 field (Add'l Discount) in an order detail group, which will allow further discounting at the line level. In Figure 2, the same item was entered on the detail line; however, both the BASE (Base Price), and ADD (Additional Detail Discount) adjustments were found. The additional five percent discount now sets the final unit price at $75.8670. Notice that the percentage discount is what leads us down this trail of acquiring more than two decimal places on the unit price.

![Price History showing both the BASE (Base Price), and ADD (Additional Detail Discount) adjustments](image2)

Based on the detail line, in Figure 3, our printing software would print the quote with a unit price of $75.87 each and an extended price of $227.61. (JDE would calculate an extended price of 3 * $75.8670 = $227.60. Although this is only a small discrepancy, nonetheless, it is still incorrect. Most quotes are of a large dollar volume, which if not correct could result in a large amount of credits, refunds, and unhappy customers.)
How To Round Unit Prices
With Advanced Pricing

So the issue to resolve is this: How do we get JDE's Order Entry program to round the unit price to the nearest penny, so that we won't have a discrepancy between what our system calculates, and what the customer sees on the printed Quote?

We found the answer in Advanced Pricing.

We defined two adjustments, ROUND1 & ROUND2, in Advanced pricing as shown in Figure 4. The Preference Hierarchy should be defined to be All Items/All Customers.
How To Round Unit Prices
With Advanced Pricing

Next, we added the price detail record as shown in Figure 5:
How To Round Unit Prices
With Advanced Pricing

Figure 5: ROUND1 adjustment detail: Note that the Factor will subtract 99% of the current unit price.
Next, we added another adjustment, ROUND2 as shown in Figure 6:

Figure 6:  ROUND2 Adjustment Detail:

Note that this adjustment multiplies the current unit price by a factor of 9,900% (or multiplies by 99).
These two adjustments need to be added to the bottom of the Price Schedule.

Figure 7: ROUND1 and ROUND2 adjustments on the Price Schedule
Let's test the rounding adjustments. We'll add another detail line to the same Sales Quote.

Figure 8: Unit price rounded up to the nearest penny

Aha! You can see that the rounding adjustments did their job. The unit price has now been correctly rounded up to the nearest penny. The quote that our printing software generates will now agree with our JDE sales order system. Now, that’s a beautiful thing!
For those who want to see the price history details, here they are:

I am not a mathematician, but it appears that subtracting 99% of the price and then multiplying by 99 has taken care of our problem of a 4-digit unit price needing to be rounded to a 2-digit unit price.

Let's see what else we can do with this new-found knowledge. What if we wanted to round to the nearest 10 cents?
How To Round Unit Prices
With Advanced Pricing

Figure 10: Price Adjustment Schedule

We have removed the first two rounding adjustments and added two more, ROUND3 and ROUND4.

Let's check out the details of these two adjustments:
How To Round Unit Prices With Advanced Pricing

Figure 11: Price Adjustment Detail for ROUND3

Notice that ROUND3 subtracts 99.9% of the price.

That means that ROUND4 needs to multiply the price by a factor of 999, right?
How To Round Unit Prices
With Advanced Pricing

Figure 12: Price Adjustment Detail for of ROUND4

Right! ROUND4 multiplies the current net price by 99,900% or by a factor of 999.
Let's add another line to our test quote:

Figure 13: Sales Order Detail Revisions

Success, yet again! We must be doing something right!

Let's look at the Price History on Line 3:
Figure 14: Price History

Works! Not just works as designed, but really works.
Ready for one more? How about rounding the unit price to the nearest dollar?

You know the drill. Get rid of ROUND3 and ROUND4 and add ROUND5 and ROUND6.

Figure 15: Price Adjustment Schedule with ROUND5 and ROUND6 added
ROUND5 subtracts 99.99% of the current net price.
Figure 17: ROUND 6 Price Adjustment Detail

ROUND6 multiplies the unit price by a factor of 9,999 (999,900%).

Let's see if they work.
How To Round Unit Prices
With Advanced Pricing

Figure 18: Sales Order

Now, that's another beautiful thing!

This concludes our brief lesson in how to get Advanced Pricing to round the unit price.

We're sure there are other tricks out there such as rounding to the nearest half-cent, or five cents, or fifty cents. If you know how to do these calculations, let us know and we'll add to this document over time. Email your tricks to us at mailto:Rounding@JDEtips.com.

A few additional notes:

1. Be sure to know how this technique works if you are right on the border with rounding. If the net price is $75.875, will it round to $75.87 or $75.88? My testing shows that it rounds down to $75.87.

2. When ERP9 (B9) is made available later this year, the Advanced Pricing module will probably have some pretty fancy rounding rules that are a lot more sophisticated than what you've seen here. Features include:

   - Customized Rounding such as "Wal-Mart rounding" to the nearest 4 or 7 cents.
   - Currency specific rounding such as round to the nearest 100 Lira.
   - Magnitude rounding. Truncate cents for amounts greater than a certain amount.
   - Precision. Round to nearest cent or dollar.
How To Round Unit Prices With Advanced Pricing

Lisa Coble, Carolina Biological. Lisa is a Programmer/Analyst with a JDE client. Carolina Biological went live with JD Edwards recently. Lisa took the Klee Associates Advanced Pricing Mastery Workshop prior to going live, and has obviously learned her lessons well. This is her second contribution to JDEtips, the first being an excellent tip on using Catalog Codes in Order/Basket Repricing.

The use of JDE is granted to Klee Associates, Inc. by permission from J.D. Edwards World Source Company. The information on this Website and in our publications is the copyrighted work of Klee Associates, Inc. and is owned by Klee Associates, Inc.

NO WARRANTY: This documentation is delivered as is, and Klee Associates, Inc. makes no warranty as to its accuracy or use. Any use of this documentation is at the risk of the user. Although we make every good faith effort to ensure accuracy, this document may include technical or other inaccuracies or typographical errors. Klee Associates, Inc. reserves the right to make changes without prior notice.

NO AFFILIATION: Klee Associates, Inc. and this publication are not affiliated with or endorsed by J.D. Edwards & Company. J.D. Edwards software referenced on this site is furnished under license agreements between J.D. Edwards & Company and their customers and can be used only within the terms of such agreements. J.D. Edwards is a registered trademark of J.D. Edwards & Company. JDE and OneWorld are registered trademarks of J.D. Edwards World Source Company. WorldSoftware is a trademark of J.D. Edwards World Source Company.

All other company and product names used herein may be trademarks or registered trademarks of their respective owners.