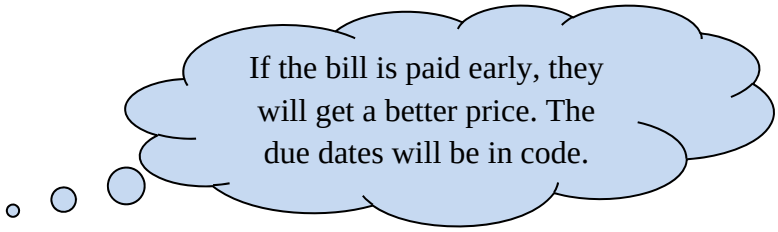


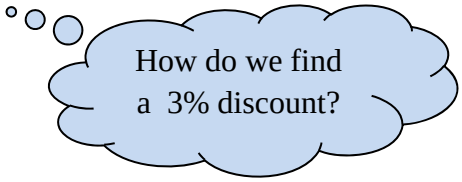
Business Mathematics
Class notes
Cash Discounts: Ordinary Dating Methods (section 7.3)

In addition to discounts that we have studied previously, a company may be offered a lower price if they pay their bill early. The hardest part is interpreting the code that tells us the due date and dates by which discounts expire. This is called **ordinary dating methods**.

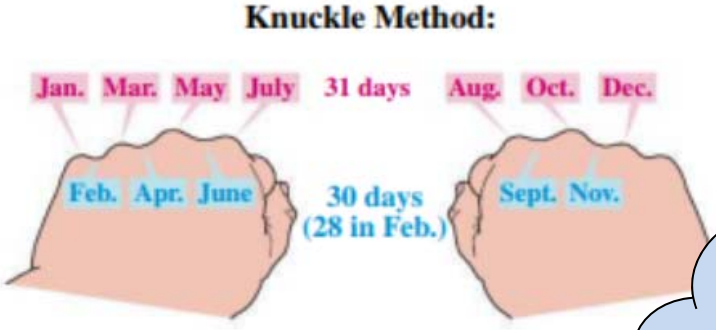
Definition: Cash discount: an additional discount taken off the invoice total but only if the bill is paid off by a certain date

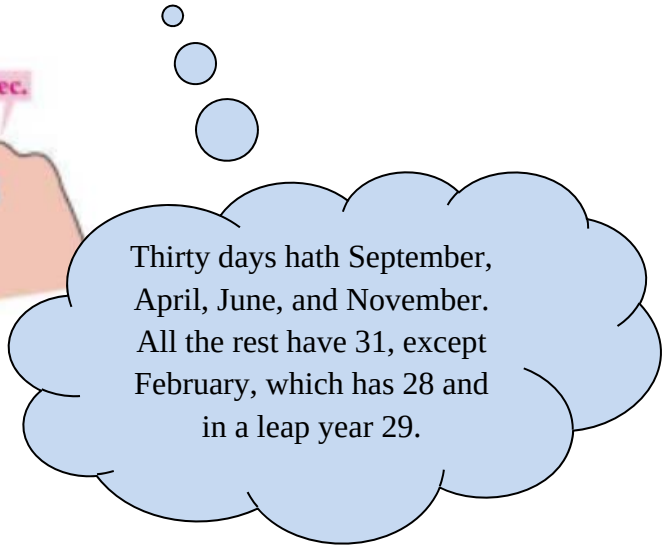
Consider an invoice with a total of $540. The terms are given as 3/15, n/30 (or equivalently, 3/15, net/30). What this means is that the buyer will receive a 3% discount if they pay within 15 days. The "net/30" part means that the bill's due date is 30 days (from the invoice date). If they pay after the 15th day but before the 30th day, they get no discount but are *not* overdue. Overdue bills, as you probably know, may incur late fees.

If the customer pays this bill within 15 days, how much should they send to the supplier?



We will have to count the number of days from certain dates. It is important to remember how many days are in each month. Below are two methods to help you remember.





Finding due dates:

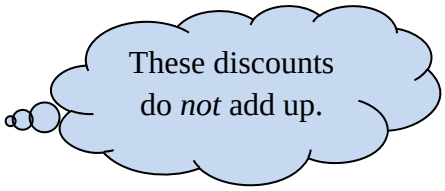
Invoices are usually dated so we will be figuring a **final discount date** and a **net payment date**. They are, respectively, the final date in order to get the discount and the final date to pay on time (to avoid a possible late penalty).

Some problems will *not* give a discount with time frame. You will only have the net payment date to calculate. Some problems will combine this new notion with the series or single discounts from the previous sections.

Shipping and insurance charges may be included in an invoice. They are *not* to be discounted.

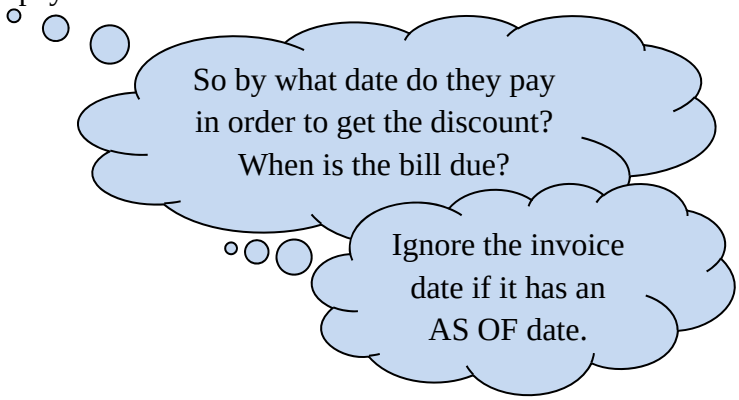
Invoices have an **invoice date**, which tells you the date the invoice was printed. Most due dates that are based on a number of days will use this invoice date as a starting point. Other invoices have an **AS OF** date. This is a later date to be used (instead of the invoice date) for due date calculations. This is called **postdating**. They use this to give buyers more time to take advantage of a discount.

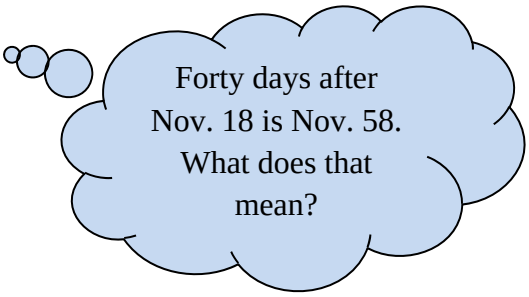
Some invoice terms will have several possible discounts. Consider an invoice that has terms 4/15, 3/20, 2/30, net 45. We'll read this from left to right.
If the buyer pays within 15 days, they will get a 4% discount.
If the buyer pays within 20 days, they will get a 3% discount.
If the buyer pays within 30 days, they will get a 2% discount.
The final due date is 45 days past the invoice date.



expl 1: Find the final discount date and the net payment date.

Invoice date: Nov. 7
AS OF: Nov. 18
Terms: 3/10, n/40





I personally figure the net payment date as I show on the final thought bubble on the previous page. But the book has another method. Here is what they do.

30 days in Nov.
– 18 date on invoice
12 days left in Nov. (from invoice date to Nov. 30)

They figure how many of the 40 days fills up Nov.

40 days given to pay bill
– 12 days left in Nov.
28 days in Dec. left to pay bill

They find how many remaining days (after Nov.) are left to pay bill.

In a later section, we will see a table (The Number of Each of the Days of the Year) that helps us do this. However, for now, we will use the methods discussed here.

expl 2: Solve for the amount of the discount and the total amount due. Add shipping and insurance charges.

Invoice amount: $1282
Invoice date: July 1
Terms: 4/15, net 40
Date invoice paid: July 7
Shipping and insurance: $21.40

Remember that S & I is *not* discounted.

Worksheet: Final Discount and Net Payment Dates:
This worksheet gives an opportunity to practice the skill of interpreting this notation and finding these dates.