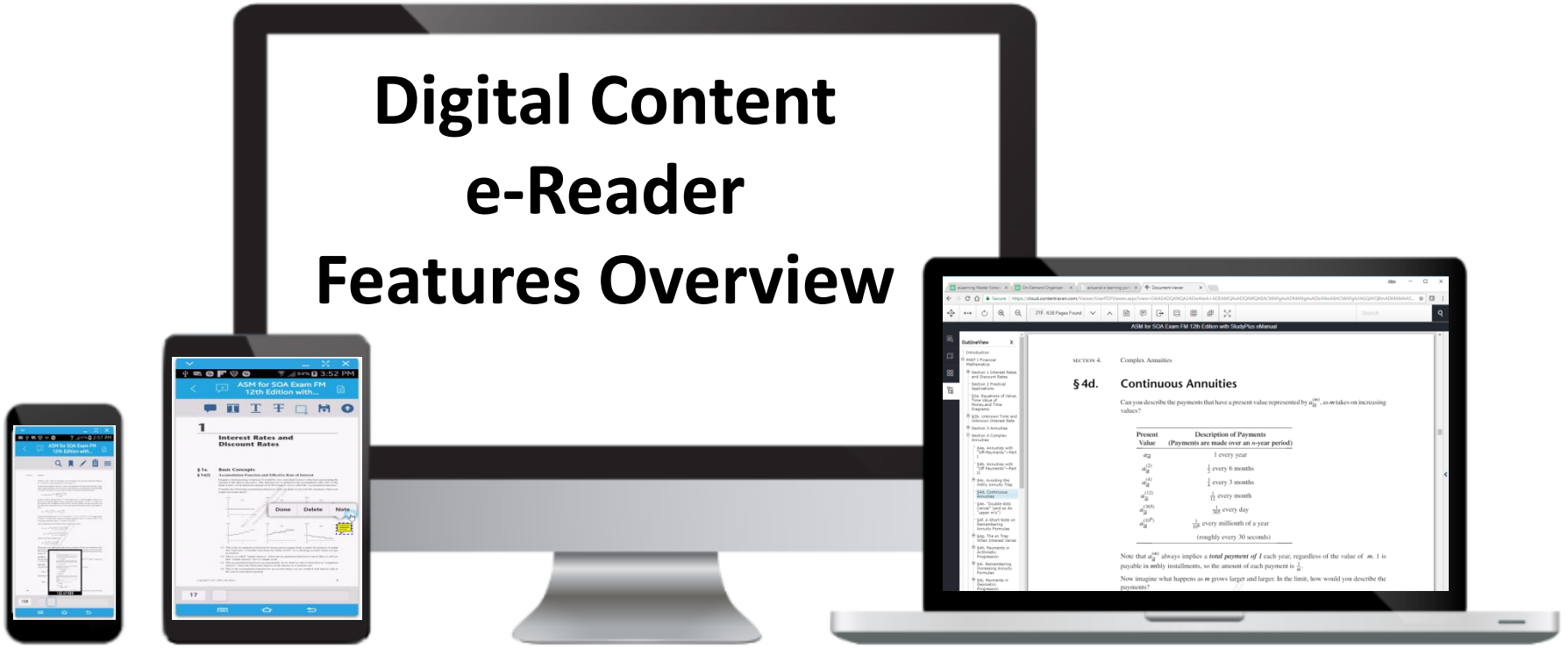
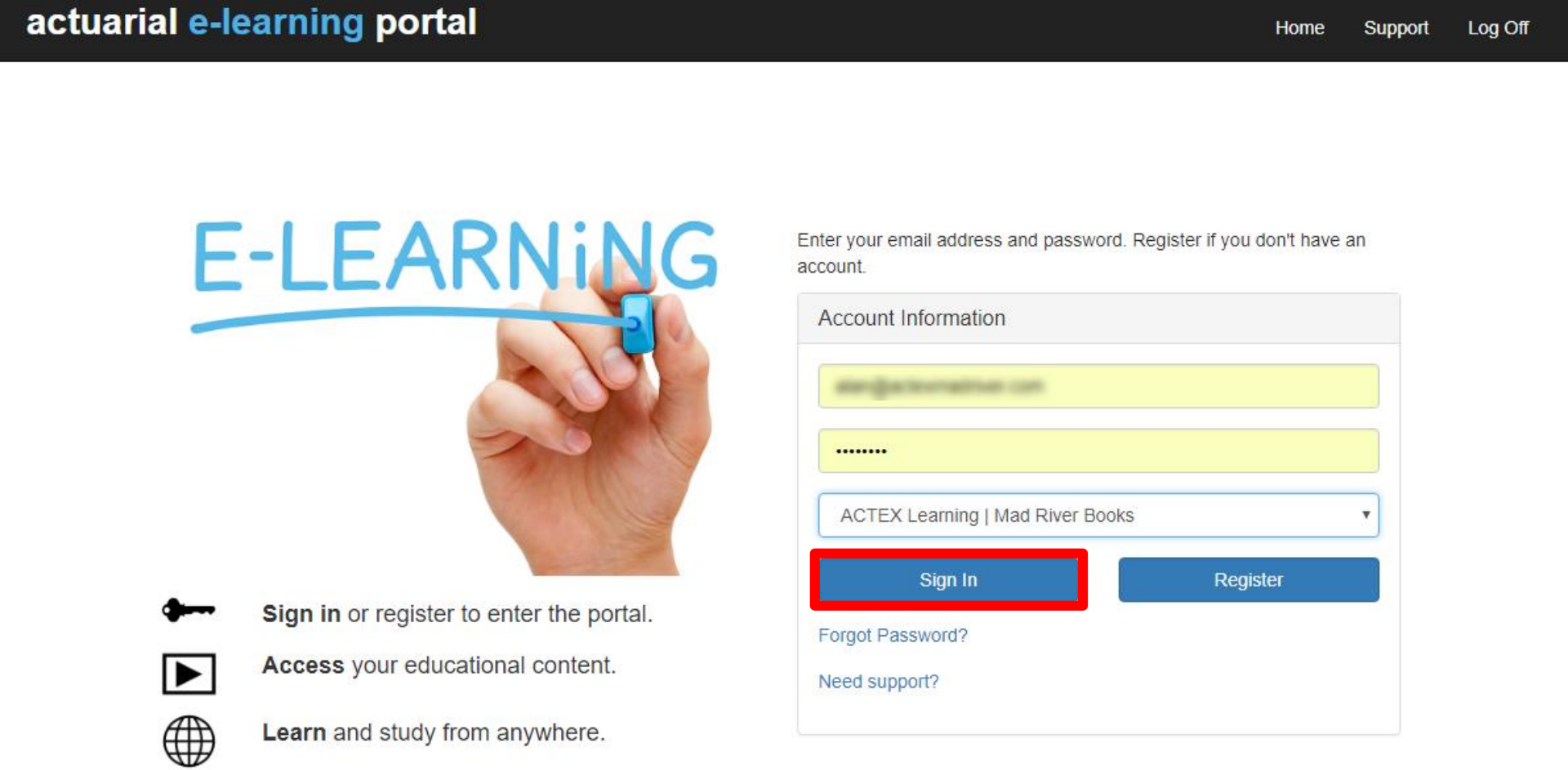
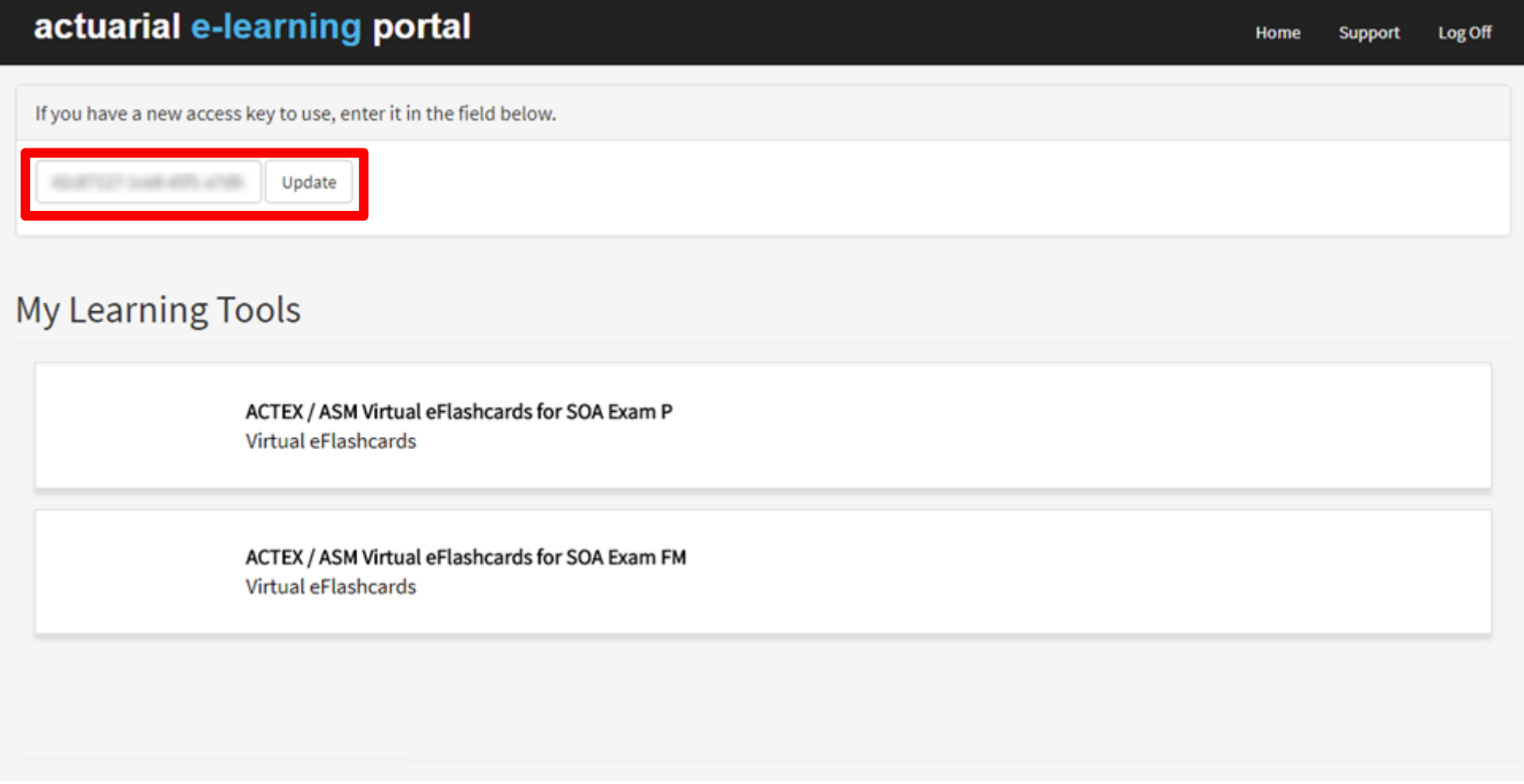
Digital Content
e-Reader
Features Overview



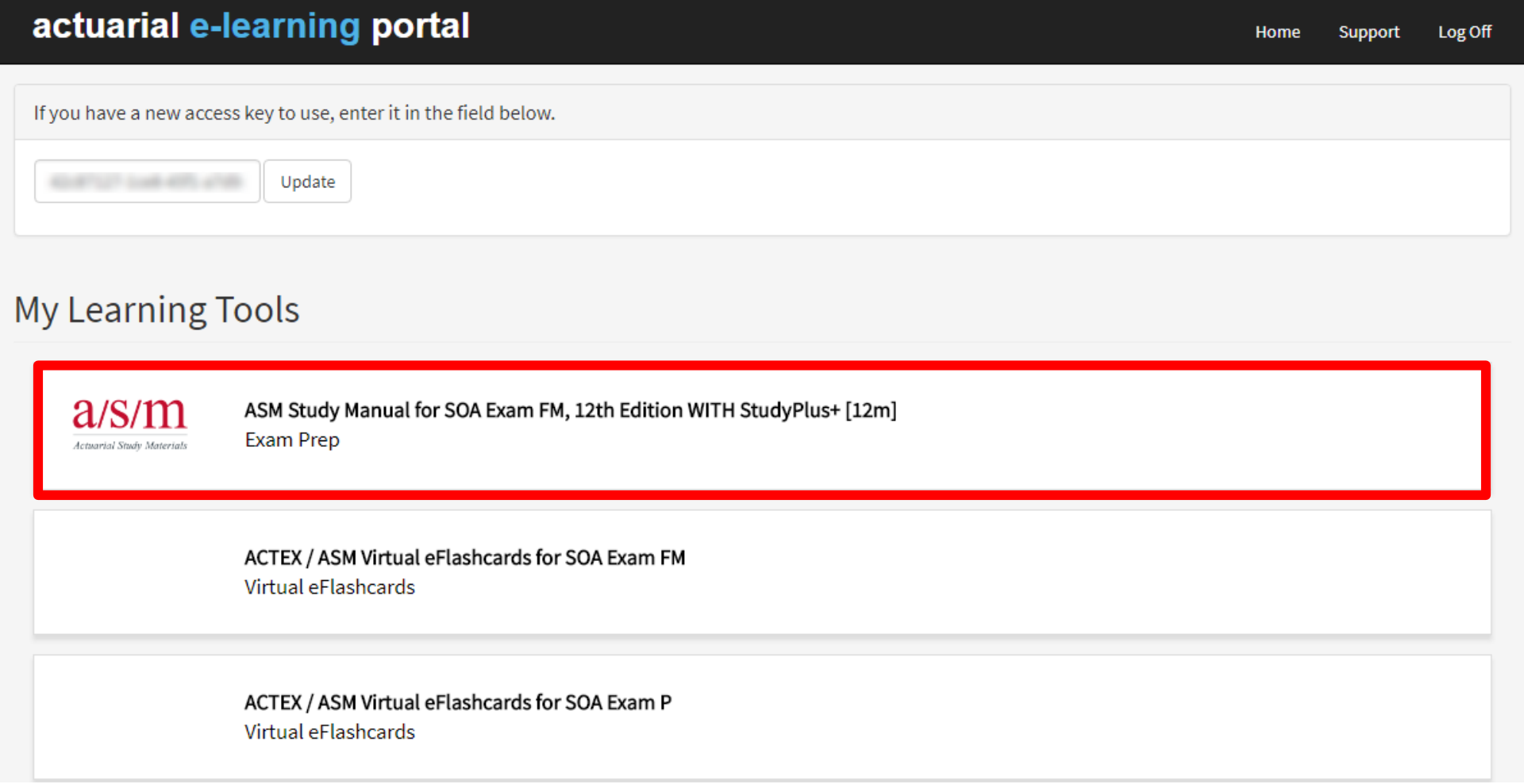
Announcing the launch of our new digital content e-reader.
This brief overview will demonstrate some of the most important features of our new e-reader.



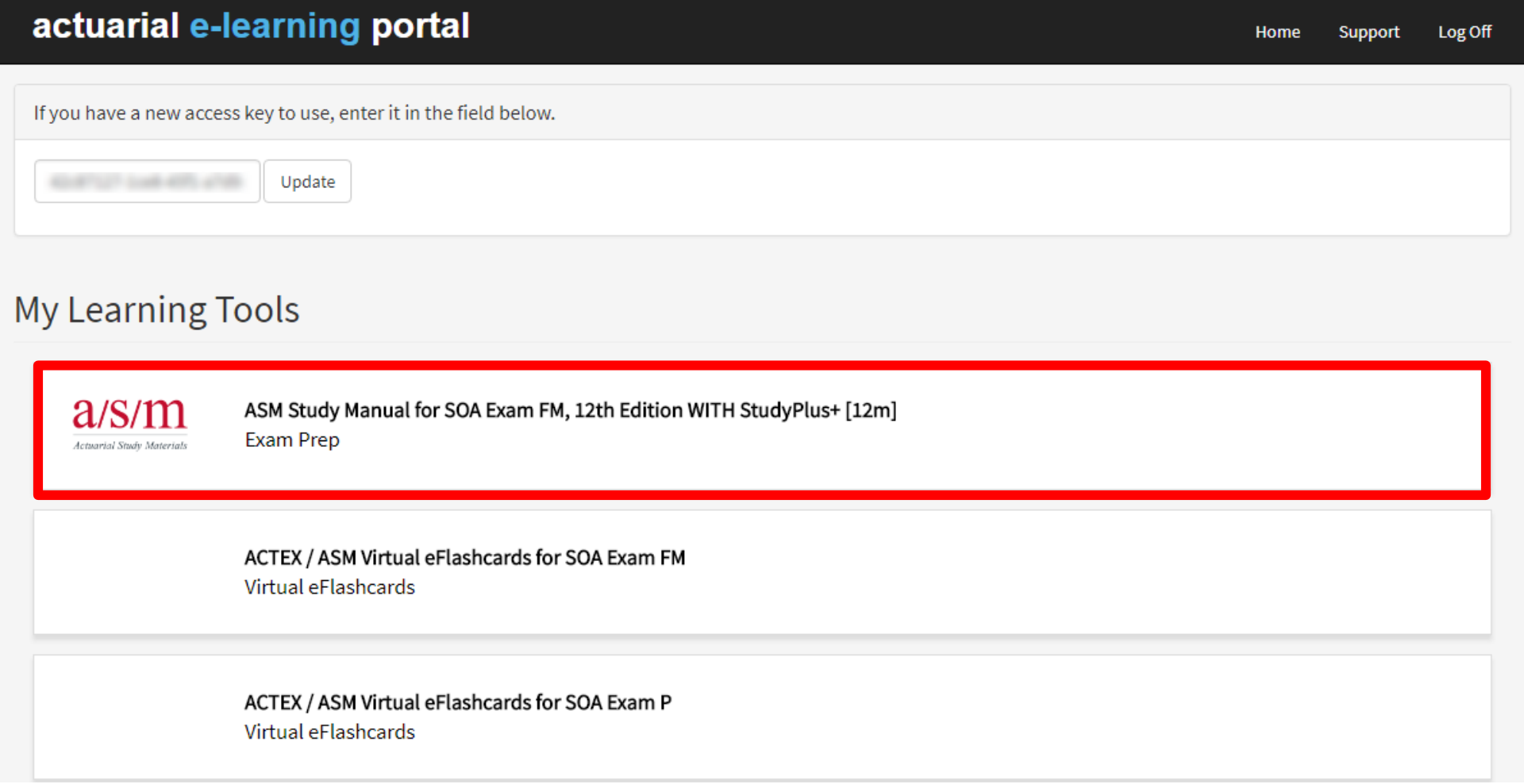
Once you receive your code, login to the actuarial e-learning portal



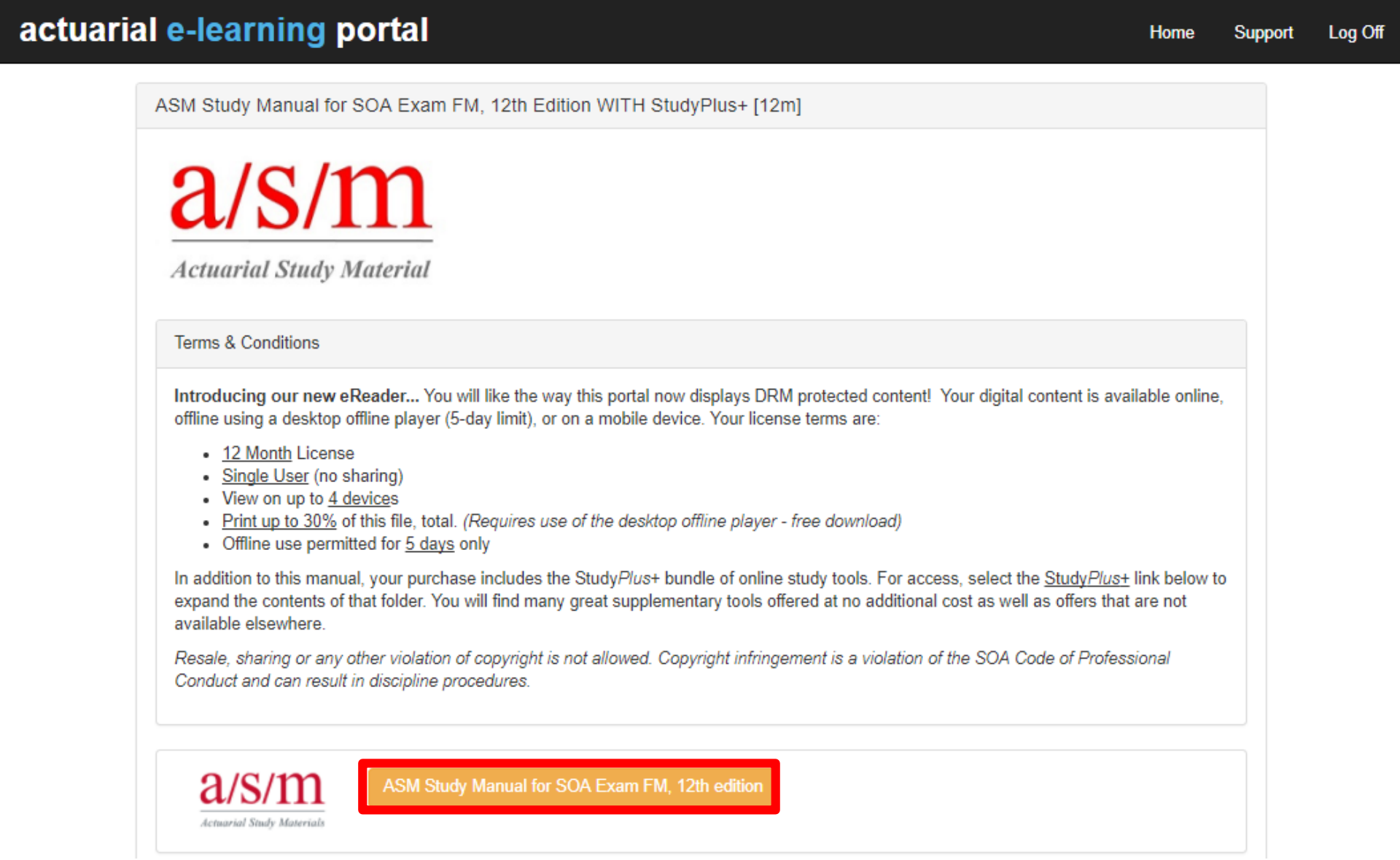
At the top of the "My Learning Tools" page, enter the access code and select 'Update' to claim your digital content.



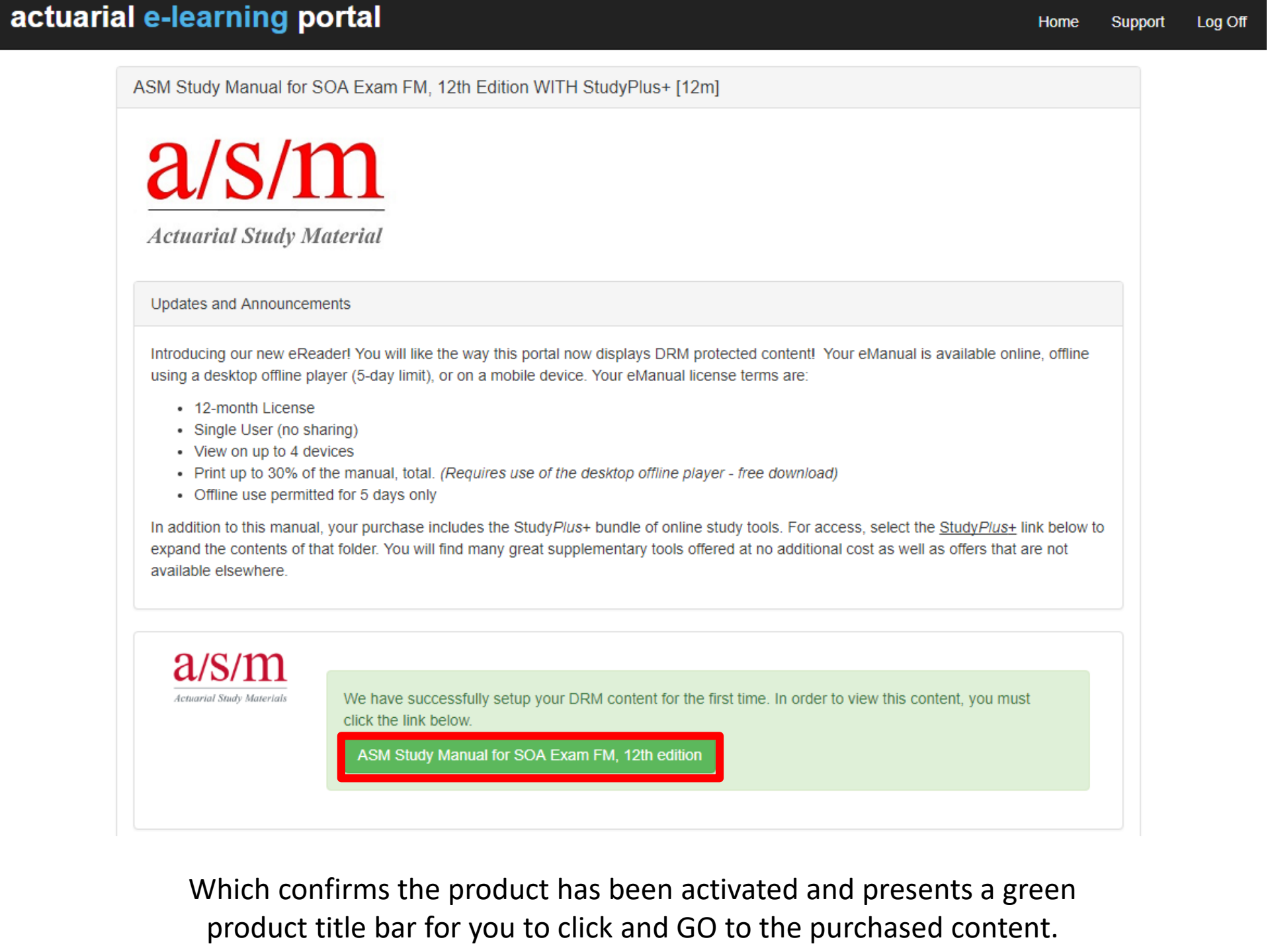
The newly added product will appear in the ‘My Learning Tools’ content list below.



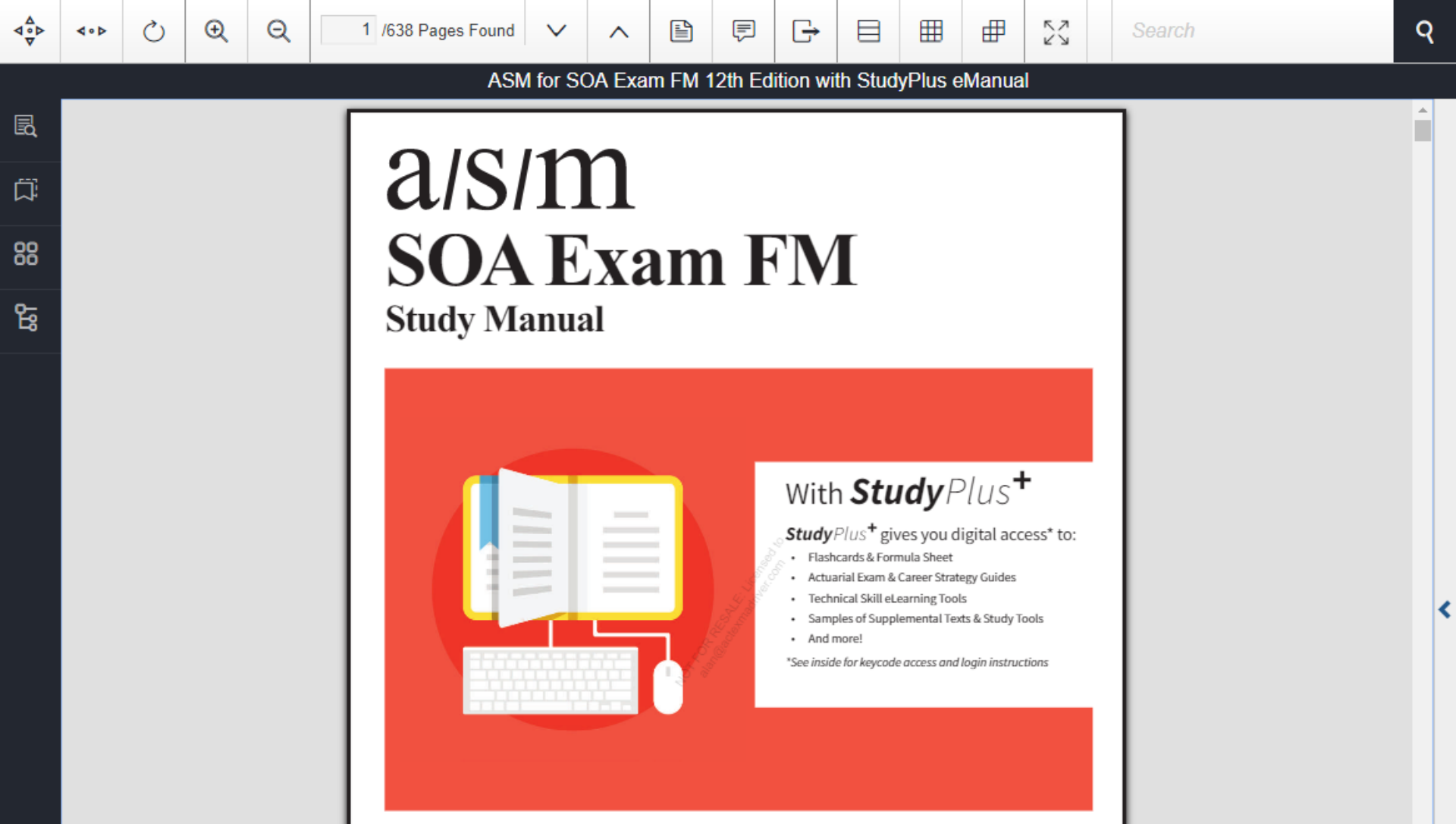
Select the product you wish to view by clicking on the title box…



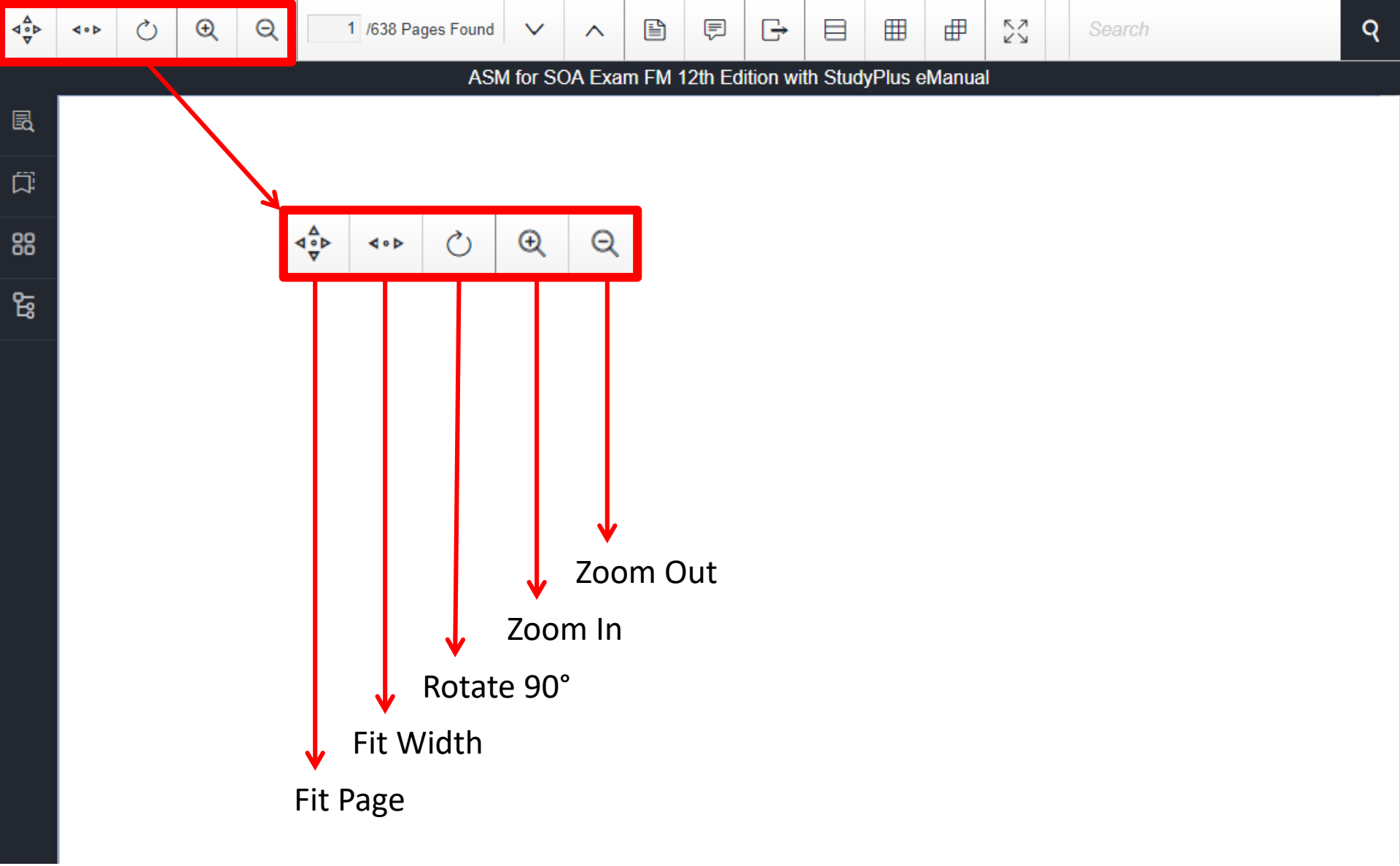
Which presents the home page of this material. Newly assigned DRM-protected content will be shown in a gold title bar. First, you will need to activate this content by clicking the gold bar.



Which confirms the product has been activated and presents a green product title bar for you to click and GO to the purchased content.

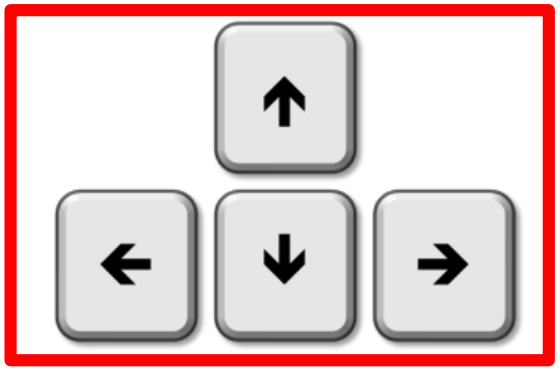


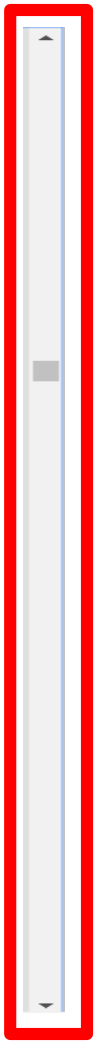
The content will be displayed in a new browser window, within the new e-reader.
This is the web-based e-reader for online viewing; there is also a Desktop Offline Reader for offline reading and printing (when applicable)
and a mobile application for either online or offline access.
Let's take a look at the online reader menu.



Starting with the top menu bar, let's take a look at the views.
You can either fit the entire page on the screen, or you can adjust the page to fill the width of your screen with one click. You can rotate the content in 90 degree increments and you can zoom in or out to make the content larger or smaller on your screen.

534 /638 Pages Found



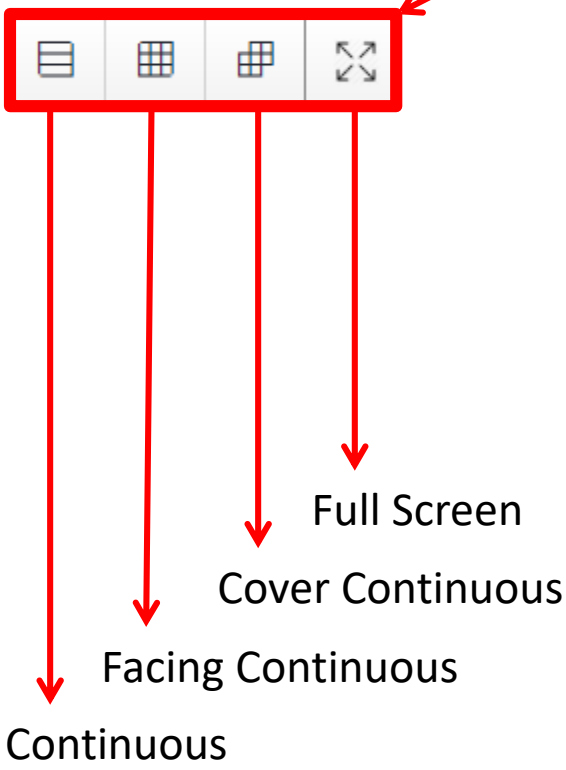


Go One Page Forward (Next)

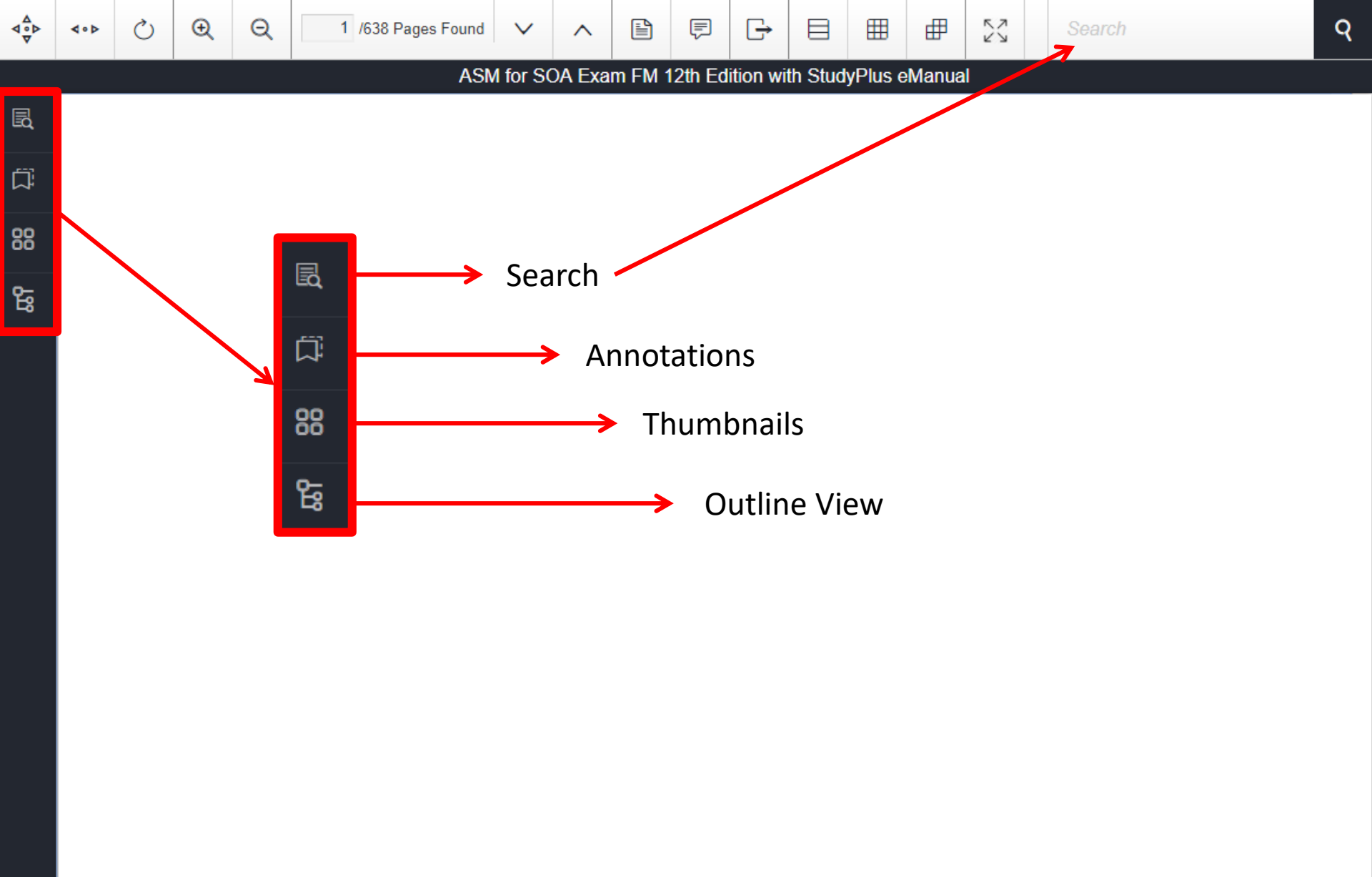
Go One Page Back (Previous)

Go To Page #

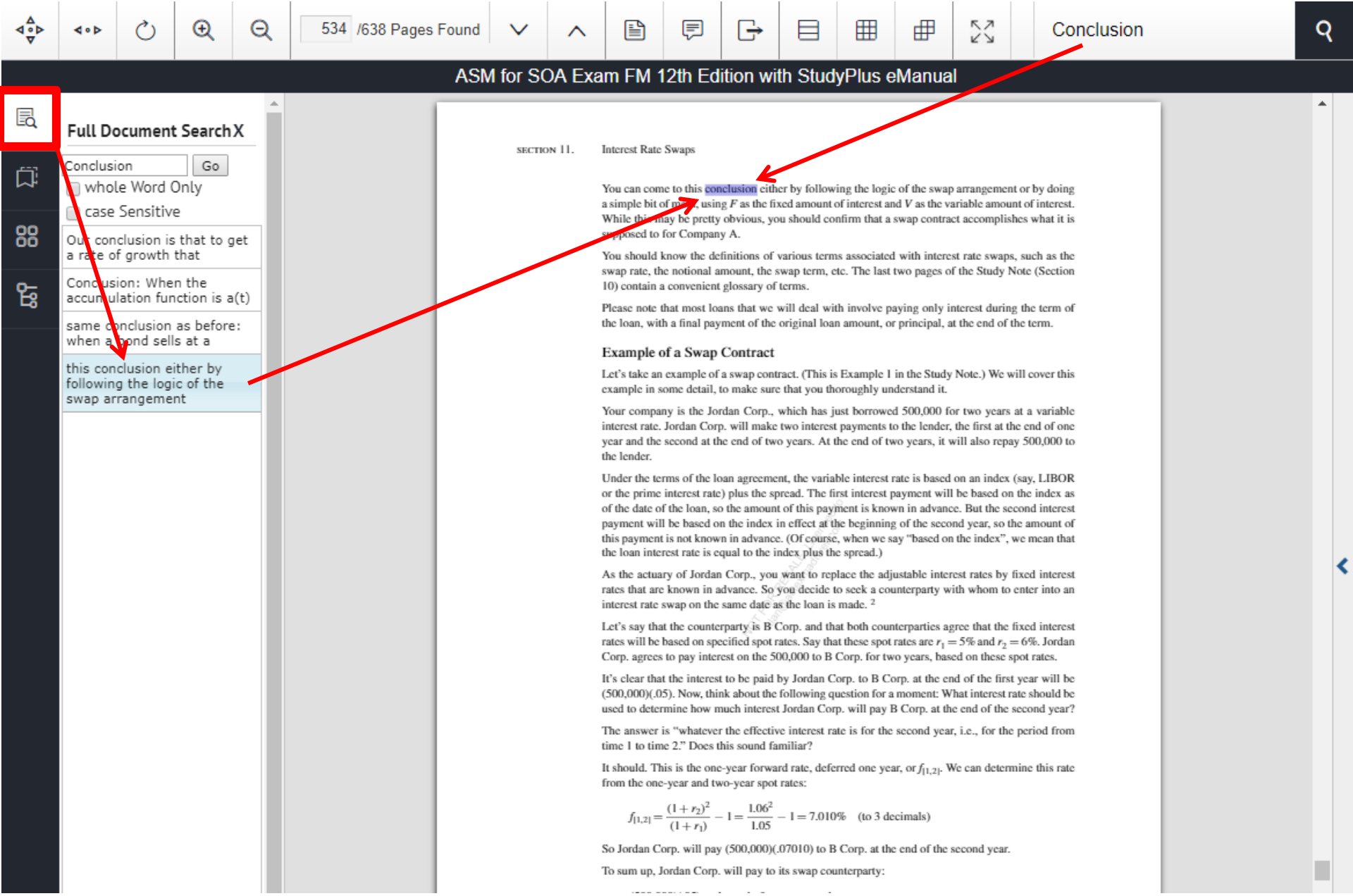
Next we will look at ways to navigate your digital content, you can select any page by entering the number or use the page forward and page back buttons. But you can also use the arrow keys on your keyboard, the scroll bar on the right side of the window, or the scroll wheel on your mouse. You can also use the thumbnail view which we will get to a little later.



Next, you can arrange the view so that the pages run continuously from top to bottom, or facing pages continuously from top to bottom or even starting with the cover on the right, facing pages continuously. You can also view in full-screen mode, just press ESCAPE to return.



Along the left-hand side of the new e-reader are pop-out options we will now explore. These are: Search, which is also available in the upper-right corner of the reader, Annotations, Thumbnails and finally Outline view. Let's take a closer look at these.



Starting with Search, you can click the icon to expand the pop-out search and enter your term, you will see a list of found search items.

Annotations X

order by :
Page time
Search in the comments...
Save

1

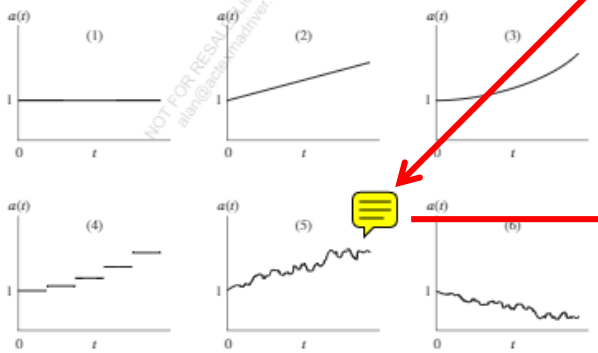
Interest Rates and Discount Rates

§ 1a. Basic Concepts

§ 1a(i) Accumulation Function and Effective Rate of Interest

Imagine a fund growing at interest. It would be very convenient to have a function representing the amount in the fund at any time t. The function $a(t)$ is defined as the accumulated value (AV) of the fund at time t of an initial investment of \$1.00 at time 0. $a(t)$ is called the "accumulation function."

~~Consider the following accumulation functions. Can you think of any real-life situations where you might encounter them?~~



(1) This is the accumulation function for money put in a piggy bank or under the mattress. It might also represent "a friendly loan from my father-in-law" or a checking account where you get no interest.

alan@actexmadriver.com - Highlight
1:38 PM Oct 30
Edit Delete

alan@actexmadriver.com - Underline
1:38 PM Oct 30
Edit Delete

alan@actexmadriver.com - Strikeout
1:38 PM Oct 30
Edit Delete

alan@actexmadriver.com - Comment
1:38 PM Oct 30
This one is very squiggly. It must be correct.
Edit Delete

Next, you can pop-out the annotations tools and highlight, underline and strikeout any text in the document, you can also place a sticky-note anywhere on the page and you'll notice the notes panel will expand from the right-hand side of the page and let you visually see the annotations you've made. Each page with annotations will have a blue line that you can quickly scroll to or click to refer back to it directly.

Annotations X

order by :
Page time
Search in the comments...
Save

1

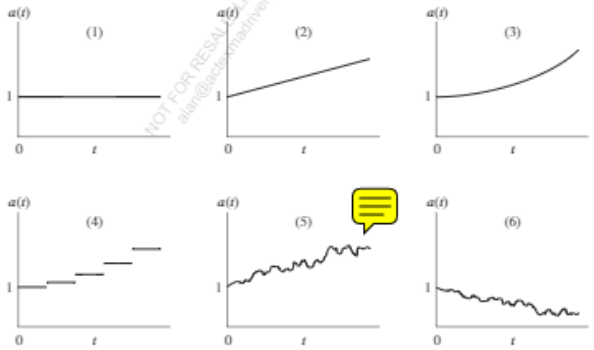
Interest Rates and Discount Rates

§ 1a. Basic Concepts

§ 1a(i) Accumulation Function and Effective Rate of Interest

Imagine a fund growing at interest. It would be very convenient to have a function representing the amount in the fund at any time t. The function $a(t)$ is defined as the accumulated value (AV) of the fund at time t of an initial investment of \$1.00 at time 0. $a(t)$ is called the "accumulation function."

~~Consider the following accumulation functions. Can you think of any real-life situations where you might encounter them?~~



(1) This is the accumulation function for money put in a piggy bank or under the mattress. It might also represent "a friendly loan from my father-in-law" or a checking account where you get no interest.

alan@actexmadriver.com - Highlight
1:38 PM Oct 30
Edit Delete

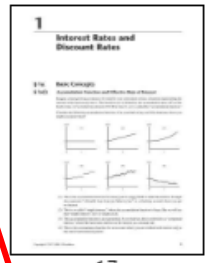
alan@actexmadriver.com - Underline
1:38 PM Oct 30
Edit Delete

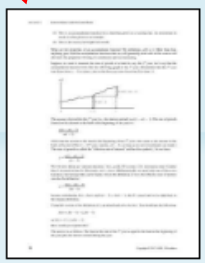
alan@actexmadriver.com - Strikeout
1:38 PM Oct 30
Edit Delete

alan@actexmadriver.com - Comment
1:38 PM Oct 30
This one is very squiggly. It must be correct.
Edit Delete

Annotations may be viewed either by page order or by the time the annotation was added. There is also the ability to search specifically within just your annotations by keyword, where only those annotations that match the search will then appear in the annotations panel. Please note, that annotations will only be within the document temporarily UNLESS you click the save button when you are done!

Thumbnails X


17


18

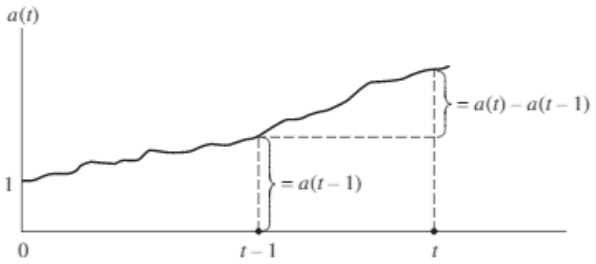

19

(5) This is an accumulation function for a fund that grows at a varying rate. An investment in stocks is often given as an example.

(6) This is the stock you bought last month.

What are the properties of an accumulation function? By definition, $a(0) \equiv 1$. Other than that, anything goes. But the accumulation functions that we will generally deal with in this course will also have the properties of being (1) continuous and (2) increasing.

Suppose we want to measure the rate of growth of a fund in, say, the t^{th} year. Let's say that the accumulation function looks like the following graph in the t^{th} year. (Remember that the t^{th} year runs from time $(t-1)$ to time t, just as the first year runs from time 0 to time 1.)



The *amount* of growth in the t^{th} year (i.e., the interest earned) is $a(t) - a(t-1)$. The *rate* of growth (based on the amount in the fund at the beginning of the year) is:

$$\frac{a(t) - a(t-1)}{a(t-1)}$$

(Note that the amount in the fund at the beginning of the t^{th} year is the same as the amount in the fund at the end of the $(t-1)^{st}$ year, namely, $a(t-1)$, as long as no new investments are made.) This rate of growth is called the "effective rate of interest" and has the symbol i_t. So we have:

$$i_t = \frac{a(t) - a(t-1)}{a(t-1)}$$

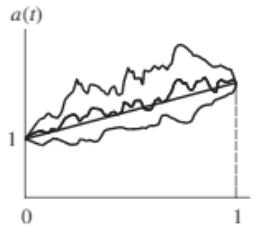
We will also define an "amount function," $A(t)$, as the AV at time t of k invested at time 0 (rather

Another way you can navigate a document is to show thumbnails and select any page from this pop-out tool.

§ 1b. Why Do We Need a Force of Interest?

Let's begin with an easy concept that you already understand from Section 1a(i): The effective rate of interest is simply the amount of interest earned during a period divided by the amount invested at the beginning of that period.

Consider the following four funds:



The four curves going from time 0 to time 1 show how each of the funds grows during the first year. As you can see, in this example the amount in the fund is the same at the beginning and the end of the year for all four funds. But they certainly grow quite differently at any moment of time during the year.

Question: What can you say about the effective rate of interest for the four funds in this year?

Answer: The effective rate of interest is *the same* for all four funds. You can see that the amount of interest earned in the year is the same for all of the funds (i.e., the increase in each fund over the year is the same). Also, the investment at time 0 for each fund is the same. So by definition, the effective rate of interest is the same for all four.

This shows that the effective rate of interest is all we need to know if we are only interested in how much interest is earned on a fund over the entire year, but gives us absolutely no information about how the fund grows at any moment during the year. In theoretical work, and in practical applications of the theory, we may need to know the rate of growth of a fund at *any moment of time*. That's what the force of interest is.

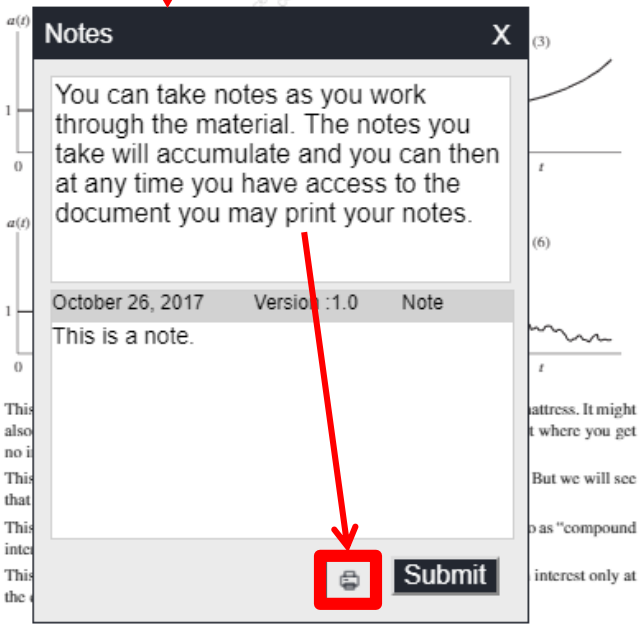
Please Note! For now, we are considering the general case, where the rate of growth varies with time. In the special case where the rate of growth is constant at every moment (which is the assumption

The last icon will let you navigate by opening the Outline View and going directly to the part, section or subsection you are looking for.

§1a(i) Accumulation Function and Effective Rate of Interest

Imagine a fund growing at interest. It would be very convenient to have a function representing the amount in the fund at any time t. The function $a(t)$ is defined as the accumulated value (AV) of the fund at time t of an initial investment of \$1.00 at time 0. $a(t)$ is called the "accumulation function."

Consider the following accumulation functions. Can you think of any real-life situations where you might encounter them?



(1) This ... attress. It might also ... where you get no i...

(2) This ... But we will see that ...

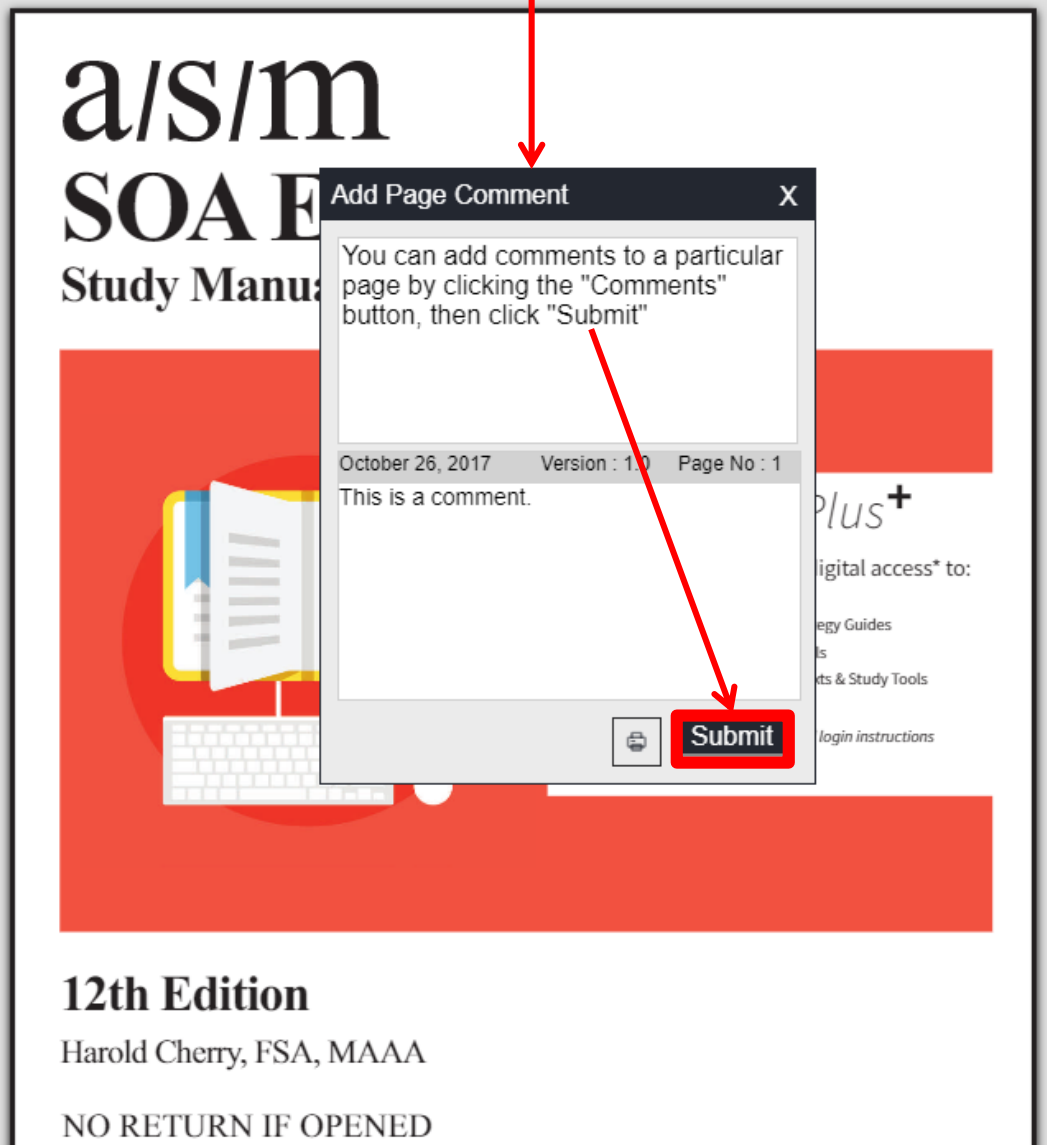
(3) This ... as "compound inte...

(4) This ... interest only at the ...

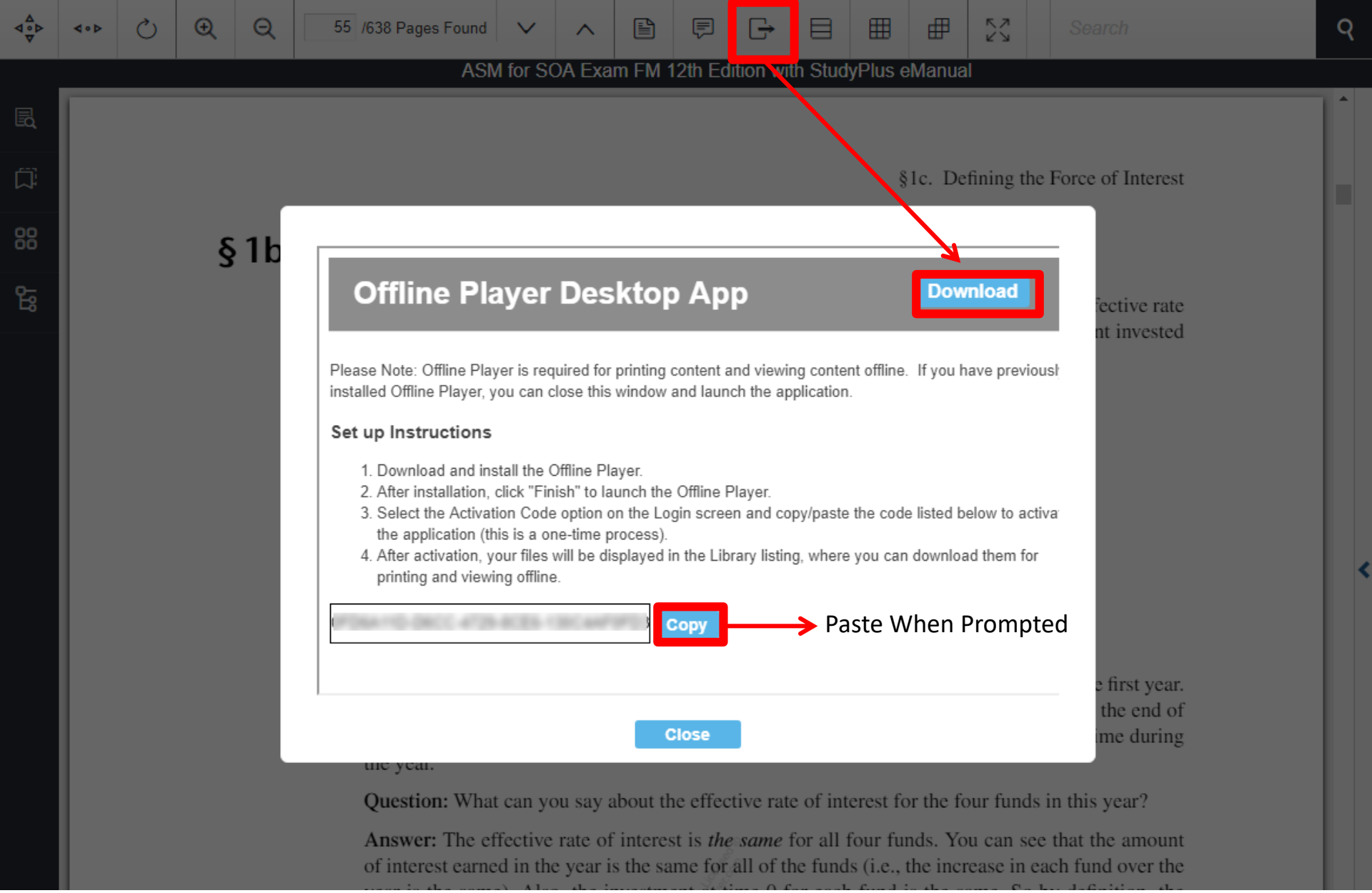
(5) This is an accumulation function for a fund that grows at a varying rate. An investment in stocks is often given as an example.

(6) This is the stock you bought last month.

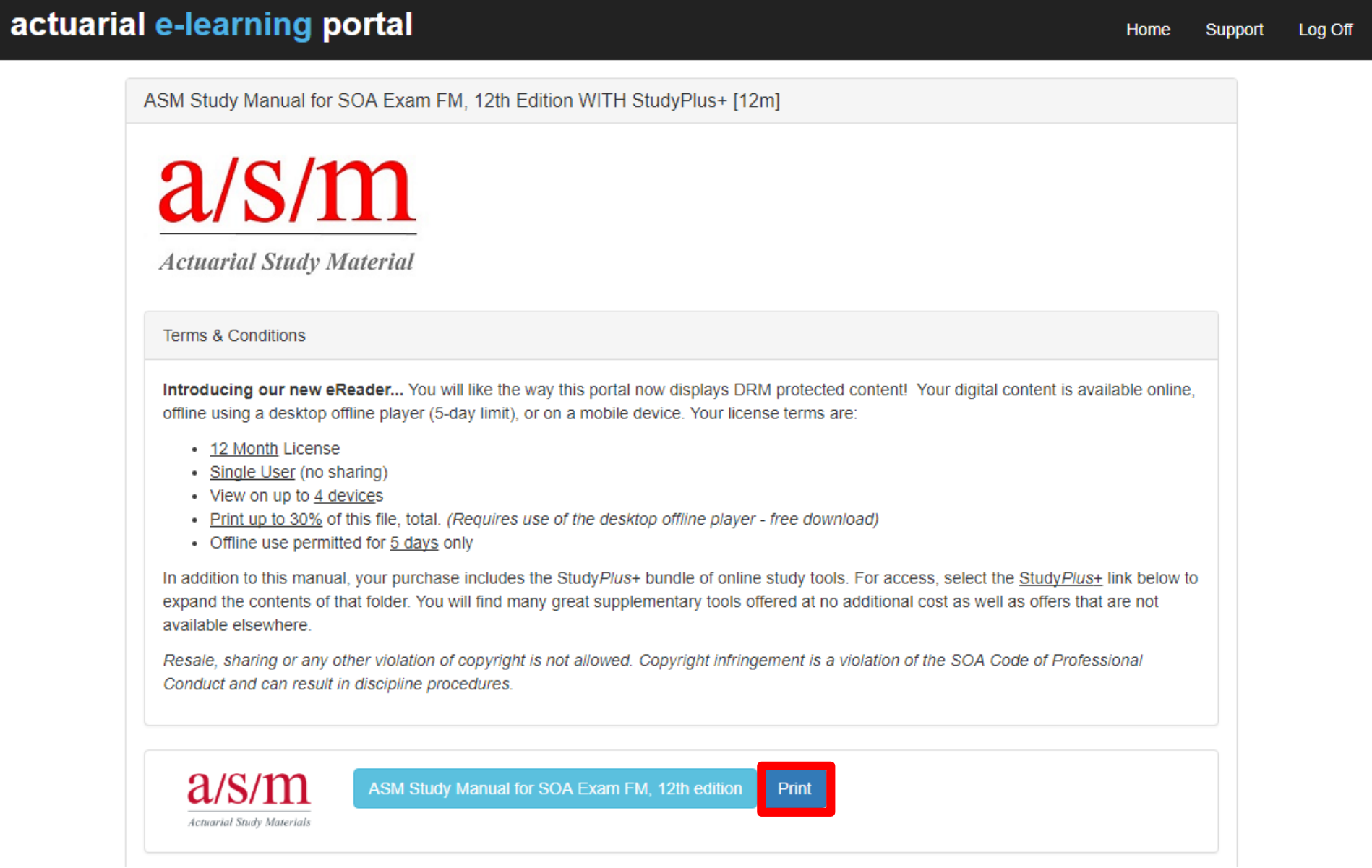
Clicking the Notes icon will allow you to take notes as you work through the material, these notes will accumulate and you can print your notes any time you have access to the document. Please be aware that notes are not analyzed by the search function.



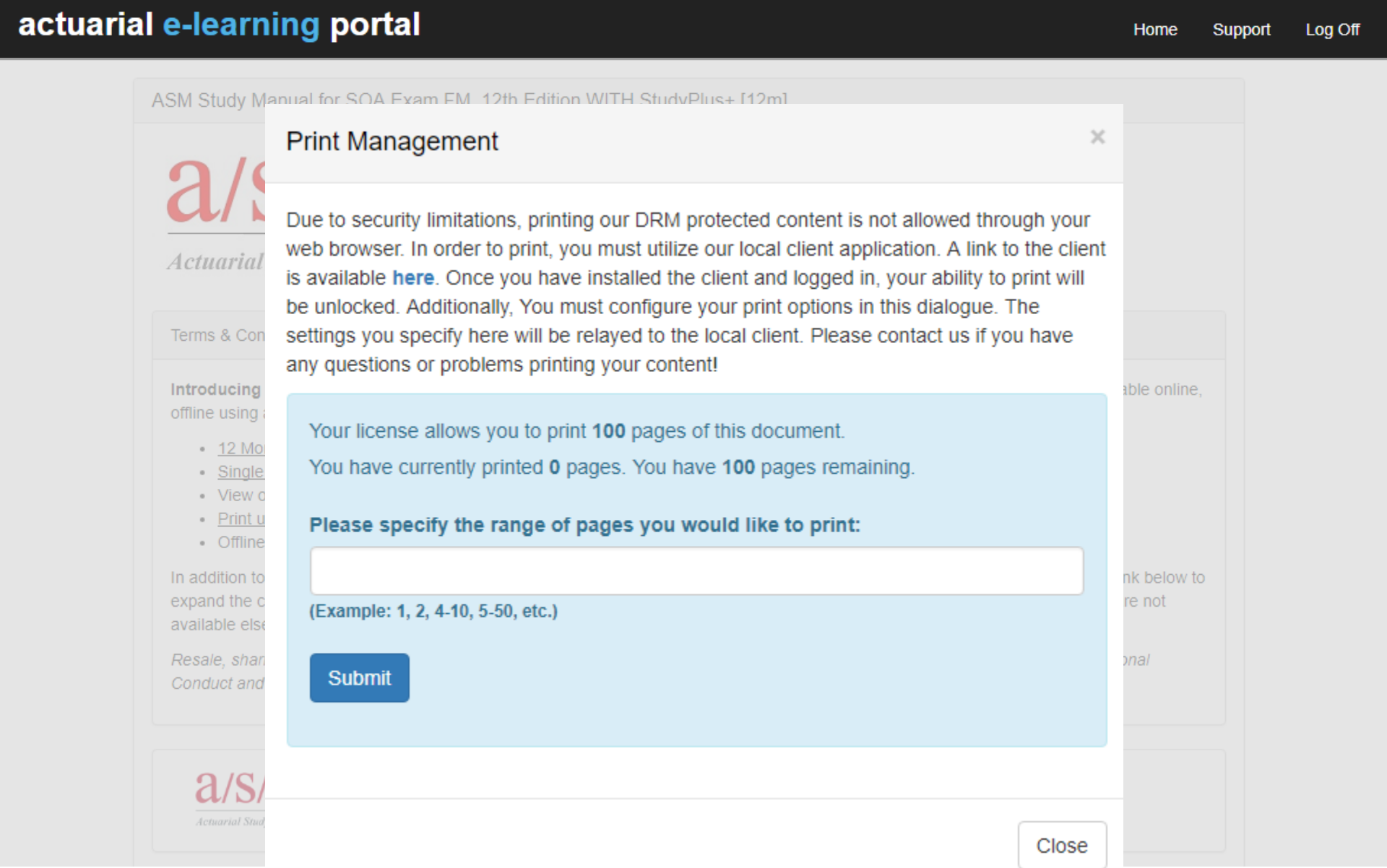
The Comments icon will allow you to make general comments for the page you are on. You may print your comments any time you have access to the document. Please be aware that comments will only be visible when you are on the page where comments were entered and they are not analyzed by the search function.



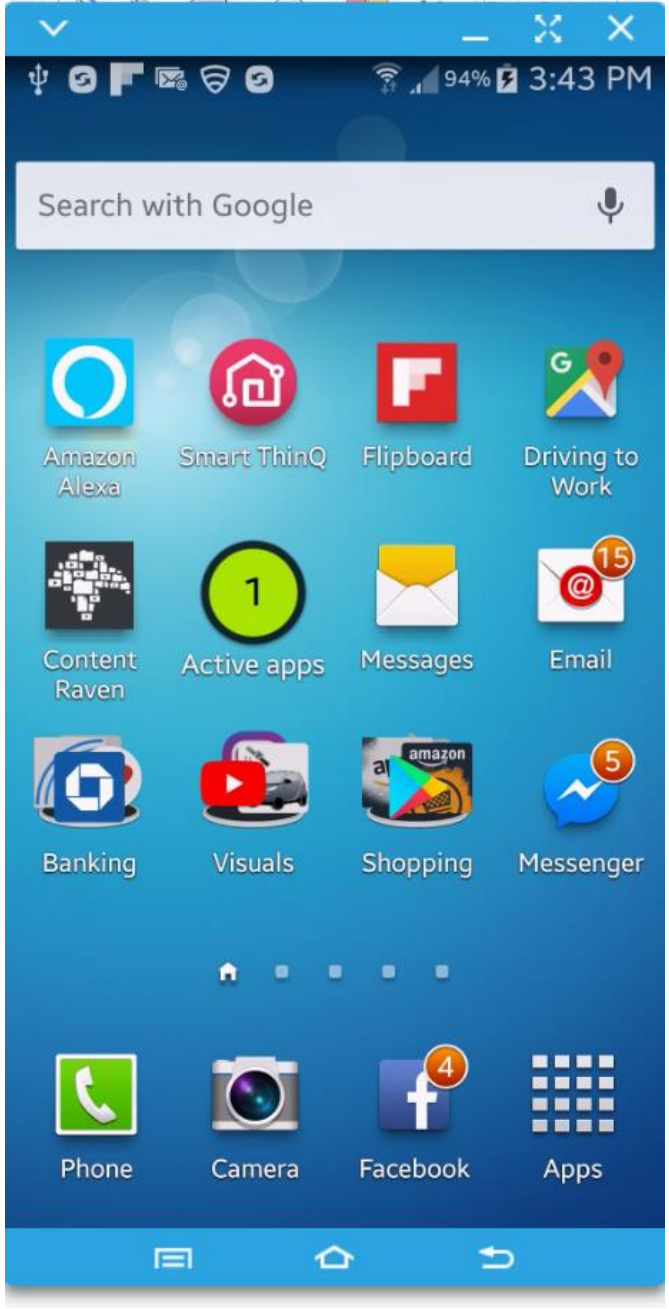
Lets take a quick look at the desktop, or offline reader. This will be required if you want to take your content offline for up to 5 days at a time, this one-time download will also enable you to print from your content (if permitted). Clicking the Download icon will launch the one-time installation of the desktop reader.



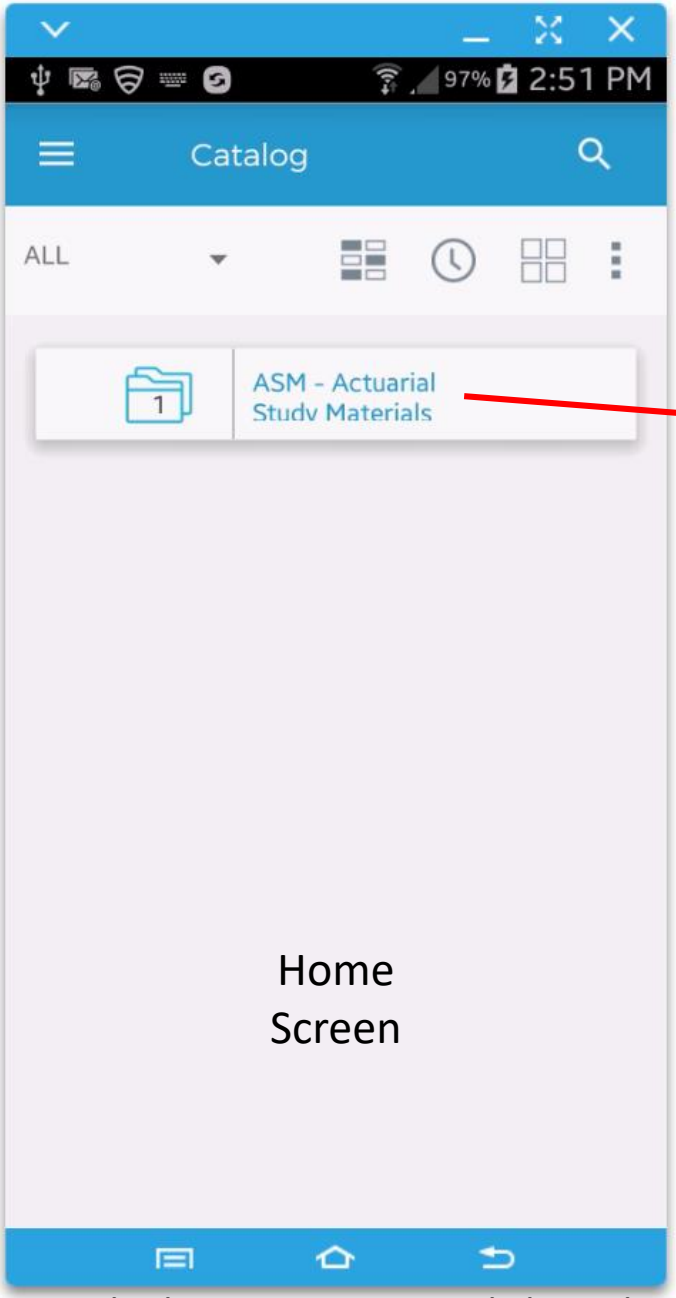
To print, you will need to have installed the desktop reader and click the Print button.



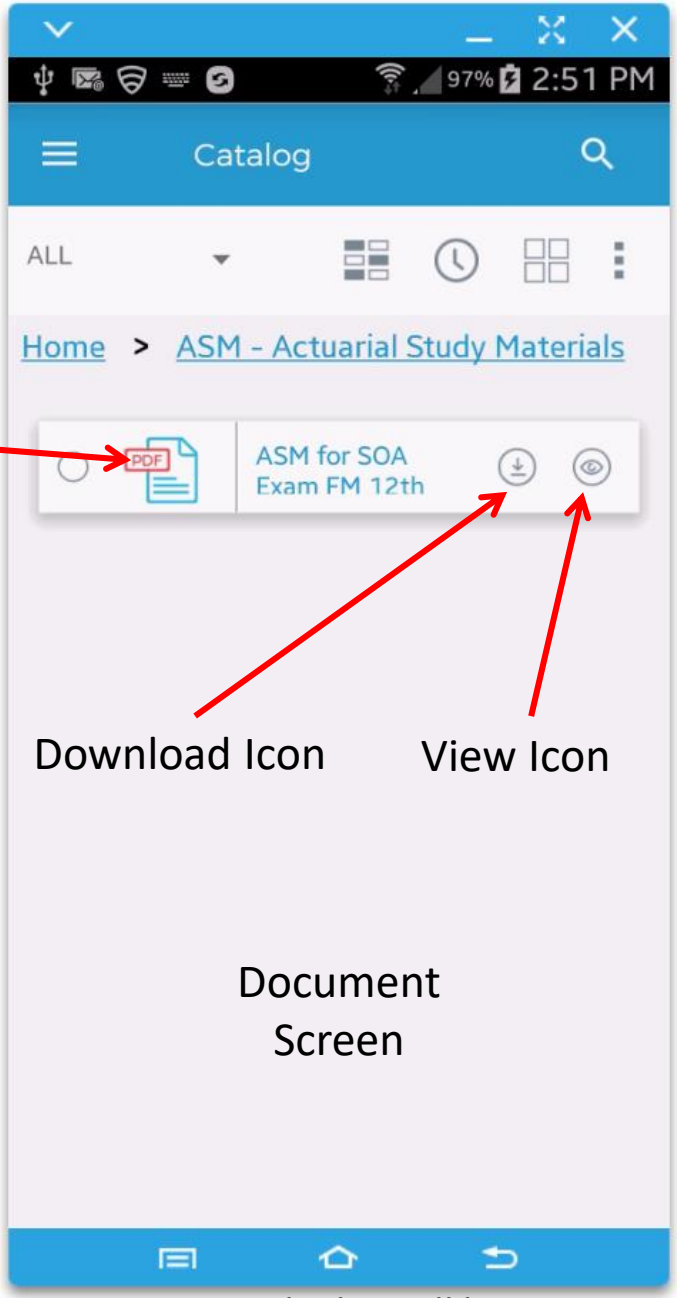
A dialog box will pop-up and inform you of the printing guidelines and then you can enter the page or range of pages you would like to print.



Now let’s move on to the Mobile reader. That’s right, you CAN take it with you!
First you will need to install the mobile player on your smart phone or tablet.



Home Screen

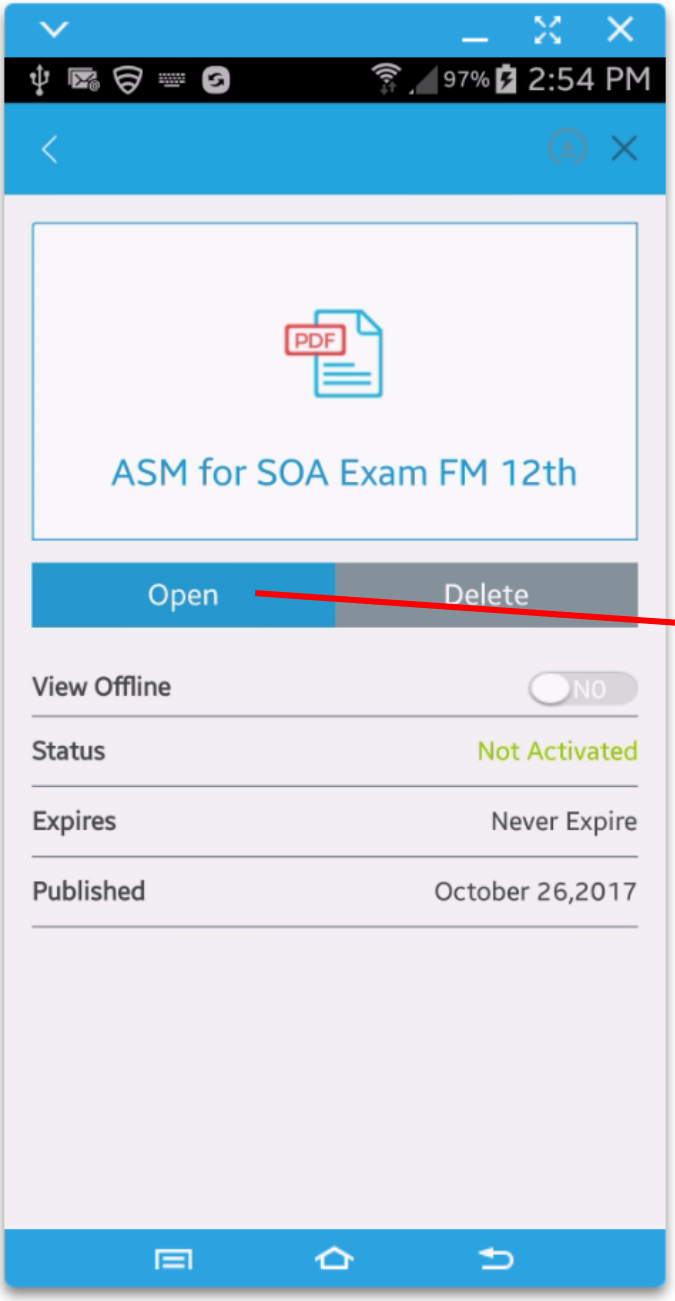


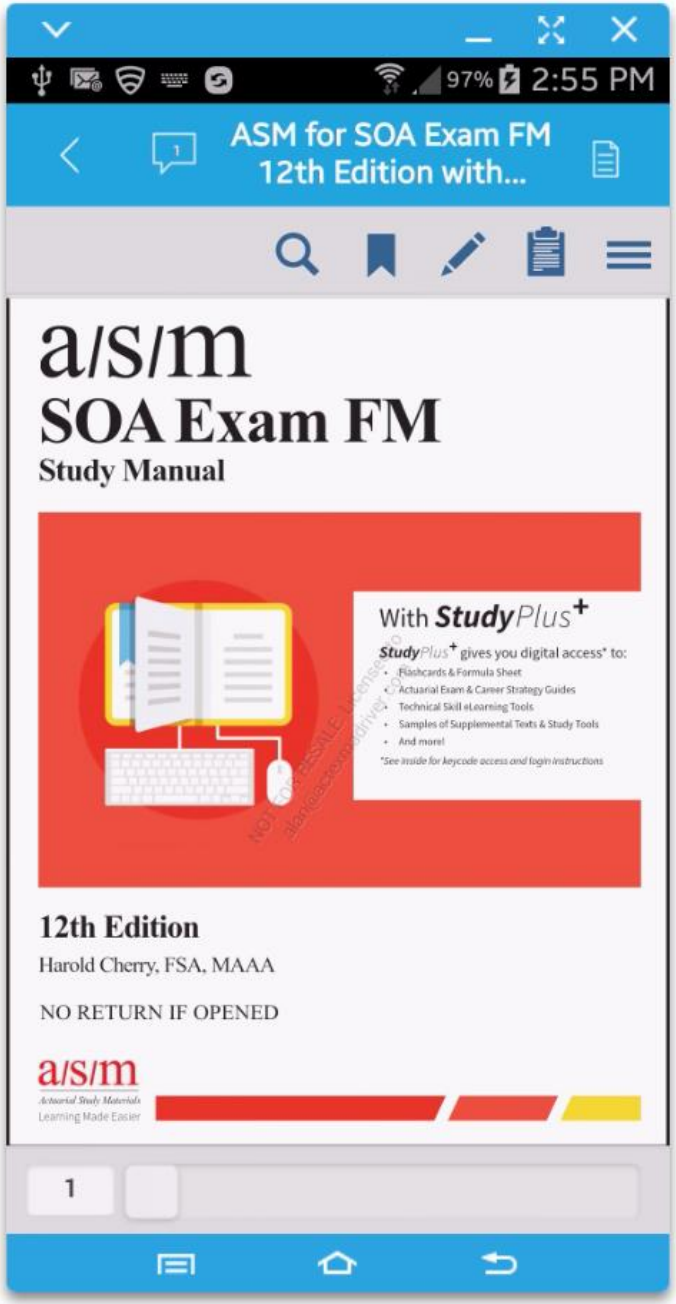
Download Icon

View Icon

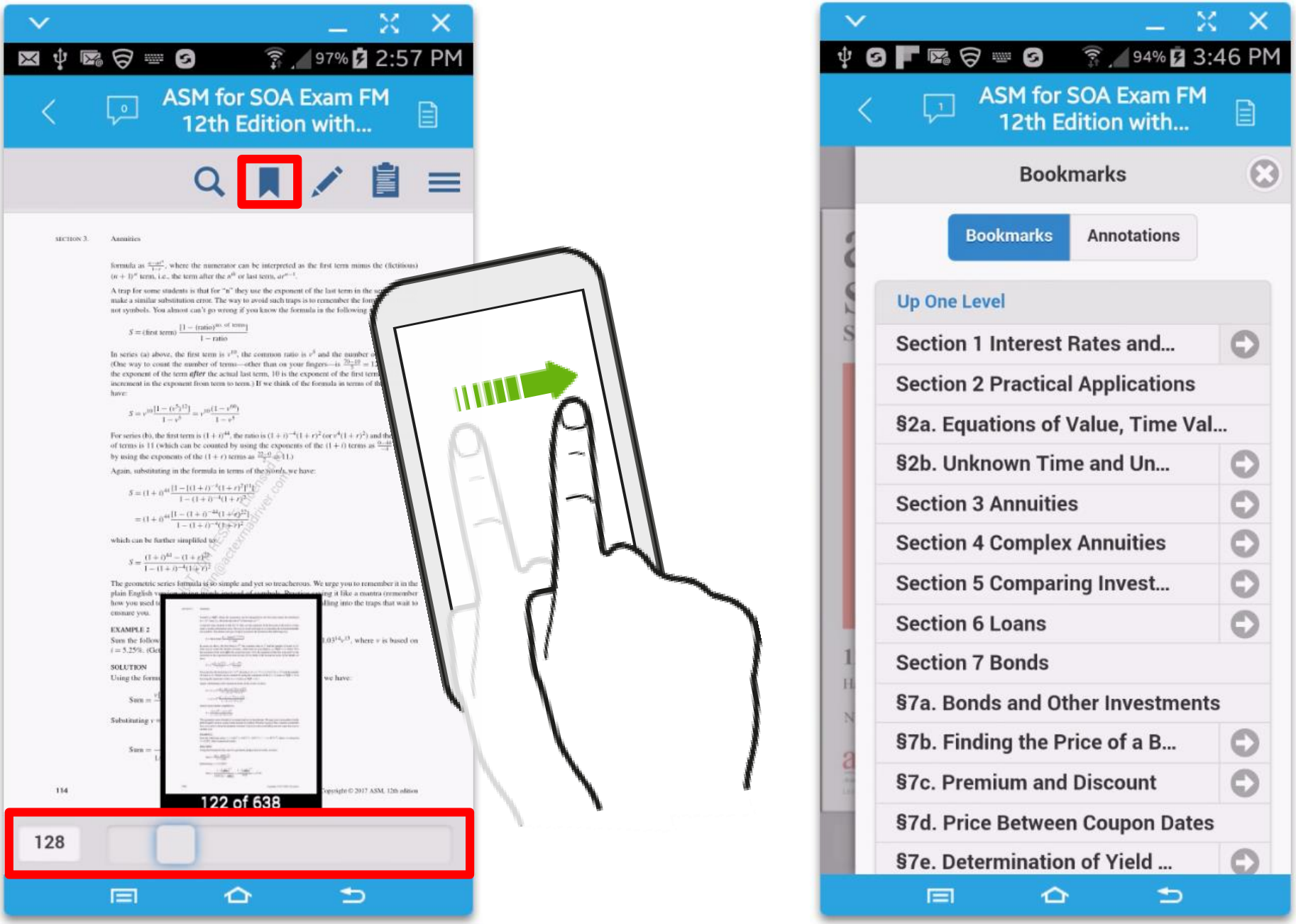
Document Screen

From the home screen just click on the folder that has the content you want to read. This will bring you to the document screen and you will see an eye-con (that's an icon that looks like an eye). Click it to open your content, or you can download your content to save data if you're not on Wi-Fi.

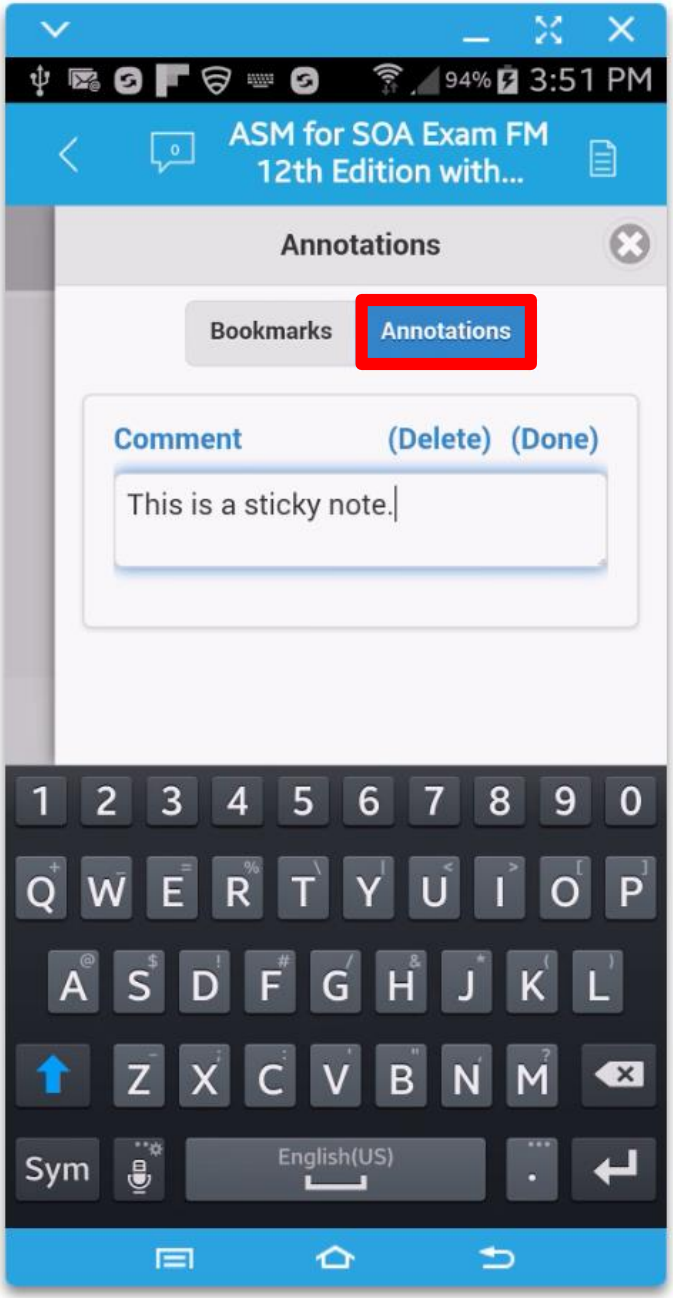


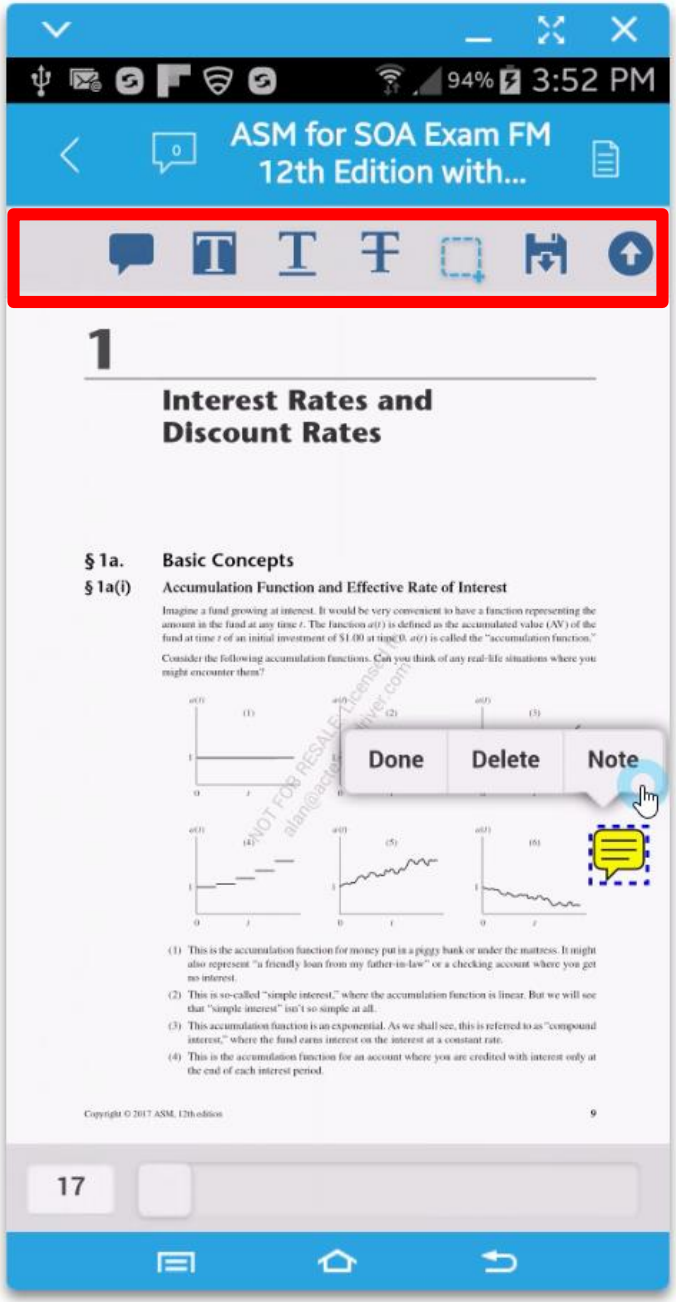


Now you're at the document and you can open it by clicking the open button or you can delete it by clicking the delete button… but don't do that, click OPEN and voila! There's your content.

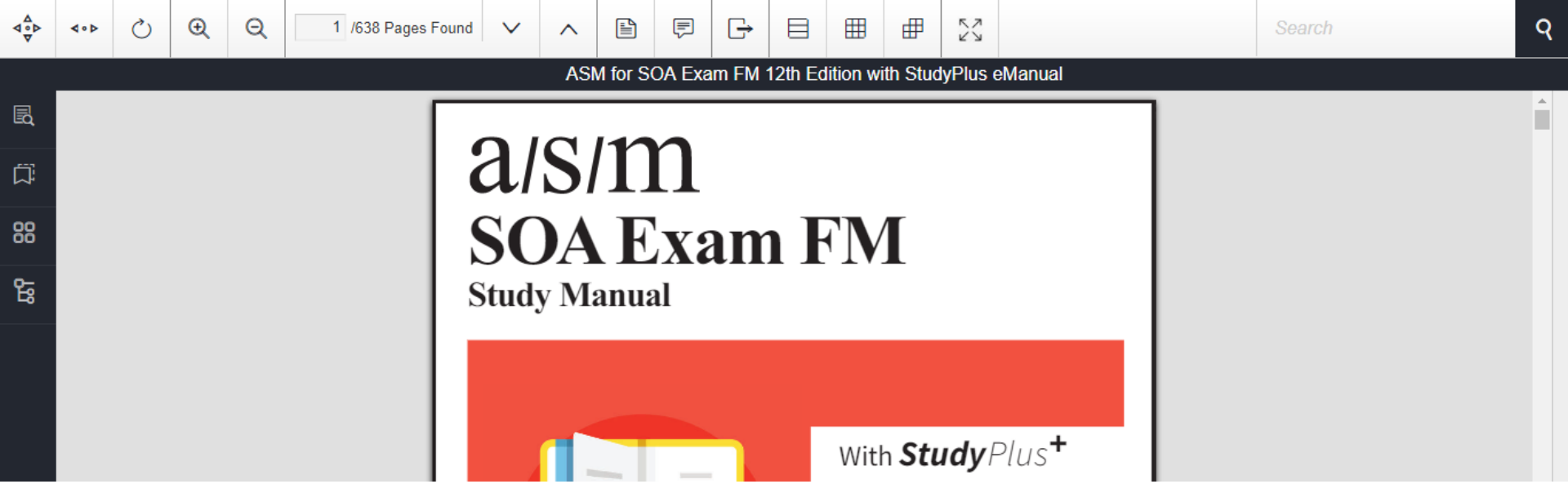


You can navigate by swiping your finger to change pages in either direction or you can click on the slider at the bottom of the screen and look for pages using the thumbnail viewer. You can also click the bookmarks icon, which looks like a ribbon in the menu bar and select just like you can in the online viewer. Also note the Annotations button here.





You can create a sticky note to place on your content.
And you'll notice that the highlight, underline and strikeout here too.



Digital Content eReader Features Overview

Thank you for taking a few moments to learn more
about the features of our Digital Content eReader.
Please refer to the frequently asked questions for more information on a wide number of topics.

Thank you for being our customer. We really appreciate your business!