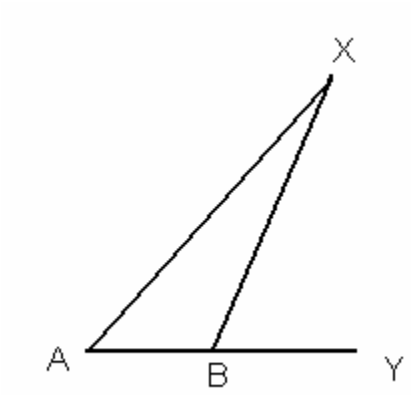
15. The following is a drawing of XAY and XBY, based on the picture in the book:



Which angle is smaller, XAY or XBY? XAY is smaller. Notice that since A is farther away from Y, it makes a smaller angle.

Using this logic, we just need to find which point is farthest from y. This point will make the smallest angle.

Looking at the picture, we can see that D is farthest away from Y of all the points. Thus, XDY is the smallest angle.

(You can prove that D is the farthest point by using the Pythagorean theorem. However this is not necessary – you can easily tell by looking at the diagram.)

16. When you look at a question like this, you should ask why on earth are they asking for "$x^2y - y^2x$". There has got to be some reason. We have some clues: they tell us the value of xy and the value of x-y.

Here's the reason:

$xy(x-y) = x^2y - y^2x$

We know that xy=7 and x-y = 5. Thus, the above equation becomes:

$7(5) = x^2y - y^2x$
$35 = x^2y - y^2x$