

Document and Block Element Review

❖ In the previous slide set we covered the following elements

- ◆ Which are Document Elements?
- ◆ Which are Block Elements?
- ◆ What is the function of each element?
- ◆ Which is the biggest heading element?

h1 h2 h3 h4 h5 h6 hr h1 h2 h3 h4 h5 h6 h7 h8 h9 h10
body head title

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X/HTML: Inline -Text Markup Elements

❖ Some of the Inline Text Markup Elements

Semantic Markup

Format Markup?

- ◆ `` Usually bold `` = Usually bold `abc`
- ◆ `` Emphasize `` = Usually *italics* `<i>abc</i>`
- ◆ `` Deleted text `` = Deleted text `<s>abc</s>`
- ◆ `<ins>` Inserted text `</ins>` = Inserted text `<u>abc</u>`
- ◆ `_{` Subscript text `}` = Subscript text
- ◆ `^{` Superscript text `}` = Superscript text
- ◆ `<mark>` Marked text `</mark>` = **Marked text**
- ◆ `<small>` Smaller text `</small>` = Smaller text
- ◆ `<abbr title="Japan">`JP`</abbr>` = JP

❖ Break Line is an *Inline* and *Empty* Element

- ◆ The line will break `
` or `
` here

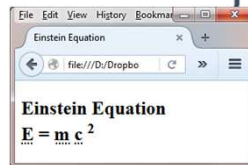
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Inline Markup Example

```

1. <!DOCTYPE html>
2. <html>
3.   <head>
4.     <title>Einstein Equation</title>
5.   </head>
6.   <body>
7.     <h2>
8.       Einstein Equation<br />
9.       <abbr title="Energy">E</abbr> =
10.      <abbr title="Mass">m</abbr>
11.      <abbr title="Speed of Light">c</abbr>
12.      <sup>2</sup>
13.    </h2>
14.  </body>
15. </html>

```



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X/HTML: Inline - Symantec Elements

❖ Computer Code Symantec Markup

- ◆ `<code>` computer code `</code>` = usually monospaced
- ◆ `<samp>` sample output `</samp>` = usually monospaced
- ◆ `<kbd>` keyboard input `</kbd>` = usually monospaced
- ◆ `<var>` variable markup `</var>` = usually italics

❖ Miscellaneous Inline Text Markup Elements

- ◆ `<cite>` title of a work `</cite>` = usually italics
- ◆ `` specifying text `` = no inherent formatting
- ◆ `<pre>` preformatted text `</pre>` = monospaced and all white space displayed including multiple spaces, tabs, and new lines

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Quadratic Equation Solution

Nested Inline Example

Solve: $x^2 - 2x = 35$

Step 1: Move all the terms to one side by subtracting 35 from both sides
 $x^2 - 2x - 35 = 0$

Step 2: Factor trinomial into product of two binomials
 $(x - 7)(x + 5) = 0$

Step 3: Set each factor to zero and solve.
 $(x - 7) = 0$ or $(x + 5) = 0$

Step 4: Solve for the two solutions
 $x_1 = 7$ and $x_2 = -5$

```

1. <!DOCTYPE html>
2. <html>
3. <head>
4.   <title>Algebra Example</title>
5. </head>
6. <body>
7.   <h2>Quadratic Equation Solution</h2>
8.   <h3>Solve: <var>x</var><sup>2</sup> - 2<var>x</var> = 35 </h3>
9.   <p>Step 1: Move all the terms to one side by subtracting 35 from both sides<br>
10.  <strong><var>x</var><sup>2</sup> - 2<var>x</var> - 35 = 0 </strong></p>
11.  <p>Step 2: Factor trinomial into product of two binomials<br>
12.  <strong><var>x</var> - 7)<var>x</var> + 5) = 0</strong></p>
13.  <p>Step 3: Set each factor to zero and solve.<br>
14.  <strong><var>x</var> - 7) = 0 </strong> or
15.  <strong> (<var>x</var> + 5) = 0</strong></p>
16.  <p><strong>Step 4: Solve for the two solutions<br>
17.  <var>x</var><sub>1</sub> = 7 </strong> and
18.  <strong> <var>x</var><sub>2</sub> = -5</strong></p>
19. </body>
20. </html>
    
```

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Character Encoding

- ❖ X/HTML Character encoding specifies the document character set used for webpage.
 - ◆ Standard US ASCII XHTML designation
 <meta http-equiv="content-type" content="text/html; charset=us-ascii" />
 - ◆ Western European Languages XHTML designation
 <meta http-equiv="content-type" content="text/html; charset=iso-8859-1" />
 - ◆ Unicode UTF-8 Recommended for X/HTML documents and includes character glyphs for all human languages
 <meta http-equiv="content-type" content="text/html; charset=utf-8" />
- ❖ HTML5 simplifies Character encoding meta tag
 <meta charset="utf-8">
- ❖ Language Specification uses <html> language attribute
 - ◆ <html lang="en"> Primary language in document is English
 - ◆ <html lang="es"> Primary language in document is Spanish
 - ◆ <html lang="ru"> Primary language in document is Russian
 - ◆ <html lang="ja"> Primary language in document is Japanese
 - ◆ <html lang="zh"> Primary language in document is Chinese

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Special Characters and Symbols

<p>&nbsp; &#160;</p> <p>< &#60;</p> <p>> &#62;</p> <p>& &#38;</p> <p>" &#34;</p> <p>@ &#64;</p> <p>Ñ &#209;</p> <p>ñ &#241;</p> <p>° &#176;</p> <p>• &#183;</p> <p>• &bull;</p> <p>™ &trade;</p> <p>» &raquo;</p> <p>→ &rarr;</p> <p>± &plusmn;</p> <p>¥ &yen;</p> <p>© &reg;</p> <p>£ &pound;</p> <p>å &aring;</p>	<pre> 1. <!DOCTYPE html> <html lang="en"><head> 2. <meta charset="utf-8"> 3. <title>Character Encoding &amp; Colors</title> 4. </head> 5. <body style="background-color: yellow; color: blue;"> 6. <h2>WebRate&trade;</h2> 7. <h3>Todays Rates:
 8. US\$ 100.00 = JP&yen; 11,275 = UK&pound; 67.30</h3> 9. <p>Copyright &copy; 2016 WebRate&trade; 10. &nbsp; &nbsp; &nbsp; H&aring;gat&ntilde;a, Guam</p> 11. </body> 12. </html> </pre>
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WebRate™

Todays Rates:
 US\$ 100.00 = JPY 11,275 = UK£ 67.30

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Factoring Trinomial using AC Method

Assignment 1 - Part B:
Code the factoring shown as valid HTML5.

Solve: $6x^3 - 40x^2 + 56x$

Step 1: $2x [3x^2 - 20x + 28]$ Factor out anything common to all terms.

Step 2: $2x [3x^2 + (-20)x + 28]$ Write trinomial in standard form $ax^2 + bx + c$

Step 3: $2x [3x^2 + (-20)x + (-28)]$ Determine product of $a \cdot c = 3 \cdot 28 = 84$

Step 4: List all pairs of factors of $a \cdot c$. If $a \cdot c$ is negative, then factors have opposite signs. If $a \cdot c$ is positive, then factors have same signs. Sign of b determines sign of factors. Factors of 84 are: -1, -84, -4, -21, -6, -14, -7, -12. Select factor pair such that their sum is b term = -20

Step 5: Split middle term b order factors as multiple of the a and c terms
 $2x [3x^2 + (-6)x + (-14)x + (-28)]$

Step 6: Factor out something common to first two terms.
 $2x [3x^2 + (-6)x + (-14)x + (-28)] \rightarrow 2x [3x(x-2) + (-14)x + (-28)]$

Step 7: Factor out same binomial in last two terms.
 $2x [3x(x-2) + (-14)(x-2)]$

Step 8: Apply Distributive Law and convert trinomial into the product of two binomials and a monomial.
 $2x [(3x-14)(x-2)] \rightarrow 2x(3x-14)(x-2)$ This is the answer

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