

## INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

### ŠIFRY

|   |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
|---|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|
| <b>Popis aktivity</b>   |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| Šifrování textu pomocí zadané tabulky.  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| <b>Potřebné pomůcky</b>   |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| Šifrovací tabulka   |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| <b>Zadání</b>   |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| Pomocí šifrovací tabulky a ilustračních příkladů zašifrujte a rozšifrujte zadaný text.  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
|   | <table border="1"> <tr> <td></td> <td>A</td> <td>E</td> <td>I</td> <td>O</td> <td>U</td> <td>Y</td> </tr> <tr> <td>A</td> <td>a</td> <td>b</td> <td>c</td> <td>č</td> <td>d</td> <td>e</td> </tr> <tr> <td>E</td> <td>f</td> <td>g</td> <td>h</td> <td>i</td> <td>j</td> <td>k</td> </tr> <tr> <td>I</td> <td>l</td> <td>m</td> <td>n</td> <td>o</td> <td>p</td> <td>r</td> </tr> <tr> <td>O</td> <td>s</td> <td>š</td> <td>t</td> <td>u</td> <td>v</td> <td>w</td> </tr> <tr> <td>U</td> <td>x</td> <td>y</td> <td>z</td> <td>ž</td> <td></td> <td></td> </tr> </table> |   | A | E | I | O | U | Y | A | a | b | c | č | d | e | E | f | g | h | i | j | k | I | l | m | n | o | p | r | O | s | š | t | u | v | w | U | x | y | z | ž |  |  |
|   | A  | E | I | O | U | Y |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| A   | a  | b | c | č | d | e |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| E   | f  | g | h | i | j | k |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| I   | l  | m | n | o | p | r |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| O   | s  | š | t | u | v | w |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| U   | x  | y | z | ž |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| V tabulce hledáme nejdříve sloupec a pak řádek. Pozor dlouhé samohlásky budeme zdvojit.   |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| Příklad 1: zašifruj slovo BRNO<br>Od daného malého písmene v tabulce jdeme nejprve nahoru do záhlaví a pak vodorovně. Každé písmeno nahradíme dvojicí samohlásek. |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| BRNO = EA YI II OI  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| Příklad 2: rozšifruj UI YI AA IE AA<br>Postup je podobný, pouze opačný, řešením je PRAHA  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| Zadání 1: Zašifrujte text: <b>TAJNÉ ŠIFRY</b>   |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| Zadání 2: rozšifrujte text: <b>EI AA IO YA EI AA IO OE YE AA UI YI OI UO EO YA IA IE OO EU</b>  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| <b>Možný postup řešení, metodické poznámky</b>  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| Učitel připraví pro žáky pracovní listy, předvede, jak se pracuje s tabulkou a žáci se pokouší rozšifrovat a zašifrovat text.                                     |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| Řešení:   |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| <ol style="list-style-type: none"> <li>IO AA UE II YA YA EO OE AE YI EU</li> <li>MATEMATIKA PRO VŠECHNY</li> </ol>  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| <b>Doplňkové aktivity</b>   |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| Šifrovat a dešifrovat jiný text. Možno upravovat šifrovací tabulku.   |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| <b>Literatura</b>   | Novoveský, Š., Křižalkovič, K., Lečko, I. <i>Zábavná matematika</i> . Praha : SPN, 1983.   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |