

```
document.write((parseInt(num) + 4) + "<br />" );  
document.write(num * 4);
```

28. Given the following JavaScript code, what will be displayed on the web page after the `document.write()` statement if the user enters 8.25 at the prompt?

```
var num = prompt("Enter a number:", 0);  
document.write(parseInt(num) + "<br />" );  
document.write(parseFloat(num));
```

29. Given the following JavaScript code, what will be displayed on the web page after the `document.write()` statement if the user enters BFF2 at the prompt?

```
var num = prompt("Enter a number:", 0);  
document.write(parseInt(num) + "<br />" );  
document.write(parseFloat(num));
```

30. Given the following JavaScript code, what will be displayed on the web page after the `document.write()` statement if the user enters BFF2 at the prompt?

```
var result = "Yes!";  
var num = prompt("What is 5 * 6?", 0);  
result = (parseInt(num) == 30)? "Yes!":"Sorry, ↵  
wrong answer . . .";  
document.write(result);
```

## Programming Challenges

---

### On Your Own

1. Create a web page that allows a user to create a username for a website. The user should be prompted to enter his or her first name, last name, and school's name. The program should create a username that consists of the user's initials concatenated with the first word of the school's name. For example, if Hector Lopez attends Universal Community College, his username would be HLUniversal. Save the web page with the filename `username_XXX.html` where XXX are your initials. Be sure to include an appropriate page title.
2. Create a web page that informs the user whether or not a person is old enough to vote. The user should be prompted to enter the age of the person in question. If the age is 18 or older, the output should read "You can vote." If the person is younger than 18, the output should read "You are too young to vote." Use the conditional operator in your JavaScript program. Save the web page with the filename `voting_XXX.html` where XXX are your initials. Be sure to include an appropriate page title.
3. Create a web page that displays the cost of a movie ticket for a customer. The user should be prompted for the age of the customer. The output should be a message telling the user what the customer's ticket will cost, based on the following criteria:
  - Under age 5 entry is free
  - Between ages 5 and 12 (inclusive) a child's ticket costs \$5.00
  - Older than 12 an adult ticket costs \$9.00

Save the web page with the filename `tickets_XXX.html` where XXX are your initials. Be sure to include an appropriate page title.

## Chapter Review and Exercises

4. Create a web page that alphabetizes two names. The user should be prompted to enter two names. The program will check to see which name comes first in the alphabet or if the two names are the same. The output should be the names listed in alphabetical order or, if the names are the same, a message stating that the names are identical. Save the web page with the filename `names_XXX.html` where XXX are your initials. Be sure to include an appropriate page title.

5. Create a web page that checks to see if the user enters a number within a given range. Write a program that uses two different methods to test if a number is between 1 and 50. One method must use the OR operator (`||`) and the other method must use the AND operator (`&&`). The web page should display the two equivalent expressions. Save the page with the filename `expressions_XXX.html` where XXX are your initials. Be sure to include an appropriate page title.

*Hint:*  $X < 5$  includes all numbers less than but not including 5. Therefore,  $5 \geq X$  is equivalent to  $X < 5$  while  $5 > X$  is not equivalent to  $X < 5$ .

6. Create a web page that identifies whether or not expressions are true or false. The page will display the following expressions. Under each expression there should be a button that the user can click to see if the left side of each expression is equivalent to the right side. If so, the value will be true. If not, the value will be false.

- $(X > 5) \ \&\& \ (X < 10) \ == \ !(X \leq 5) \ || \ !(X \geq 10)$
- $![(X > Y) \ \&\& \ (Y < Z)] \ == \ !(X > Y) \ || \ !(Y < Z)$
- $(X == Y) \ || \ (X > Y) \ == \ (X == Y) \ \&\& \ (X < Y)$
- $![(Z < X) \ || \ (Z < Y)] \ == \ !(Z < X) \ \&\& \ !(Z < Y)$

Use the following values for X, Y, and Z in your JavaScript program:

$X = 8$ ,  $Y = 3$ , and  $Z = 5$

Save the web page with the filename `true_false_XXX.html` where XXX are your initials. Be sure to include an appropriate page title.

7. Create a web page that contains a simple math test. The page should have the following arithmetic problems. Add a button under each problem which, when clicked, will display a prompt for the user to enter the answer. Add a second button which, when clicked, will check to see if the user's answer is correct. The output should be either "correct" or "incorrect" displayed in an alert box.

1.  $5 + 9 = ??$
2.  $4 * 6 = ??$
3.  $25 - 14 = ??$
4.  $48 / 3 = ??$
5.  $26 \% 6 = ??$

Save the web page with the filename `math_XXX.html` where XXX are your initials. Be sure to include an appropriate page title.