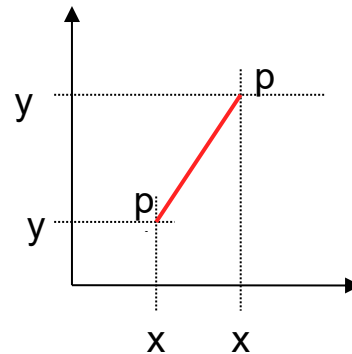


1. Why do the compound assignment operators are in the form  
expr1 op= expr2 rather than expr1 =op expr2?
2. Distance between two points: Write a program that reads the coordinates of two points, then compute the distance of them. Use proper prompt for reading two points. Use the following formula:  
Note: use the sqrt function at <cmath> header.

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

Is this a valid program? Why or why not?



3. Simple calculator: Write a program that reads two lines of input. at the first line an arithmetic operation (+, -, \*, /, %). at the second line, you should offer two integers and do the desired arithmetic operation.

Example:

```
operator (+, -, *, /, %): *
operands: 3    6
result: 18
```

4. Is this a valid program? Why or why not?

```
#include <iostream>
#include <string>
int main()
{
    /* This is a comment that extends over several lines
       because it uses /* and */ as its starting and
       ending delimiters */
    std::cout << "Does this work?\n";
    return 0;
}
```

5. Is this a valid program? Why or why not?

```
#include <iostream>
#include <string>
int main()
{
    // This is a comment that extends over several lines
    // by using // at the beginning of each line instead of using /*
    // or */ to delimit comments.
    std::cout << "Does this work?\n";
    return 0;
}
```

6. Write a program that prints out the letters 'A' to 'Z', 'a' to 'z', and '0' to '9' and their integer values. Use both *for* and *while* control structures.