Some Midterm Practice Problems

Spring 2026

1. [1 point] `word_count` is a legal identifier in Java A. True B. False
2. [1 point] `k2` is a legal identifier in Java A. True B. False
3. [1 point] `Krazy1` is a legal identifier in Java A. True B. False
4. [1 point] `hot?` is a legal identifier in Java A. True B. False
5. [1 point] `2ndPlaceWinner` is a legal identifier in Java A. True B. False
6. [1 point] `2beOrNot2Be` is a legal identifier in Java A. True B. False
7. [1 point] `cous-cous` is a legal identifier in Java A. True B. False
8. [1 point] It's legal to have an integer variable named `x` and another integer variable named `X` in the same program. A. True B. False
9. [1 point] How much is a kilobyte?
   A. 10^3 bytes
   B. 10^6 bytes
   C. 10^9 bytes
   D. 10^{12} bytes
   E. 10^{15} bytes
10. [1 point] How much is a megabyte?
   A. 10^3 bytes
   B. 10^6 bytes
   C. 10^9 bytes
   D. 10^{12} bytes
   E. 10^{15} bytes

11. [1 point] How much is a gigabyte?
    A. 10^3 bytes
    B. 10^6 bytes
    C. 10^9 bytes
    D. 10^{12} bytes
    E. 10^{15} bytes
12. [1 point] How much is a terabyte?
    A. 10^3 bytes
    B. 10^6 bytes
    C. 10^9 bytes
    D. 10^{12} bytes
    E. 10^{15} bytes
13. [1 point] How long is a millisecond
    A. 10^{-3} seconds
    B. 10^{-6} seconds
    C. 10^{-9} seconds
    D. 10^{-12} seconds
    E. 10^{-15} seconds
14. [1 point] How long is a microsecond
    A. 10^{-3} seconds
    B. 10^{-6} seconds
    C. 10^{-9} seconds
    D. 10^{-12} seconds
    E. 10^{-15} seconds
15. [1 point] How long is a nanosecond
    A. 10^{-3} seconds
    B. 10^{-6} seconds
    C. 10^{-9} seconds
    D. 10^{-12} seconds
    E. 10^{-15} seconds

16. [1 point] What is the result of:

```
int x=10, y=20;
boolean isBored=true;

if (isBored) {
   int z = x+y;
}  else {
   z = x-y;
}
System.out.println(z);
```

A. prints 30

B. prints -10

C. compiler error: illegal declaration of `isBored`

D. compiler error: can't find symbol `z`

17. [1 point] The most important job of the Java compiler is to

_____

_____

18. [1 point] In what component of your computer is most of the *computation* done?

_____

_____

19. [1 point] What is the type of the expression: `true`

_____

_____

20. [1 point] What is the type of the expression: `'1'`

21. [1 point] What is the type of the expression: 23.2

22. [1 point] What is the type of the expression: $32 + 2$

23. [1 point] What is the type of the expression: `"32"+2`

24. [1 point] What is the result of the expression: 52482/24478198

25. [1 point] What is the result of the expression: `(true || (3 == 2))`

26. [1 point] What is the result of the expression: `!(false)`

27. [1 point] What is the result of the expression: `(!(4 < 2) && 3 < 10)`

28. [1 point] What is the result of the expression: `2/5 != 2/5.0`

29. [1 point] What is the result of the expression: `!((true || 3 < 2) && !( false || true))`

30. [1 point] What is the result of the expression: `18 % 5 * 10+3 * 4 / 2`

31. [1 point] What is the result of the expression: `2 % 5 * 4+3 * 5/2`

32. [1 point] What is the result of the expression: `"Scholes" + 6*3`

33. [1 point] What is the result of the expression: $0 * (1264 + 2835) - 1.0$

34. [1 point] What is the result of the expression: `"Scholes" + 2+2`

35. [1 point] What is the result of the expression: `5+3%6/2+8*5/3`

36. [1 point] What is the result of the expression: $3 > 3\%5 + 2||5 < 7\&\&1 < 2$

37. [1 point] What is the result of the expression: $3 > 3\%5 + 2\&\&5 < 7\&\&1 > 2\%2$

38. [1 point] What is the result of the expression:

```
2+1+"."+(3/4)+3*4
```

39. [1 point] What is the result of the expression:

```
"1"+5/2+3%4*5+(6+7)
```

40. [1 point] What is the result of the expression:

```
"ascend".charAt(1) + "acknowledge".substring(3,6)
```

41. [1 point] What is most appropriate Java data type to store the number of points scored by the Eagles during the Super Bowl

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42. [1 point] What is most appropriate Java data type to store the number of days left in the semester

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43. [1 point] What is most appropriate Java data type to store your name

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44. [1 point] What is most appropriate Java data type to store your height in meters or yards

---

45. [1 point] What is most appropriate Java data type to store whether or not it's hot right now

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46. [1 point] What is most appropriate Java data type to store your middle initial

---

47. [1 point] Turn into a Java expression the statement "x is a multiple of y"

48. [1 point] Write an if/else statement that prints "in the black" if `revenue` is the same or higher than `expenses`, otherwise print out "in the red."

49. [1 point] We have two integers: x and y. Write an if statement that checks if one of them is even and the other is odd.

50. [1 point] What is the output of the following code:

```
for(int i = 0; i<10; i++) {
   if (i%3 == 1) {
      System.out.print(i);
   }
}
```

51. [1 point] What is the output of this code?

```
for(int i = 0; i<3 ; i++) {
   for(int j =0; j <= i; j++) {
      System.out.print(i + j);
      System.out.print(" "); // print a space
   }
   System.out.println();
}
```

52. [1 point] What is the output of this code?

```
public class Presidents {
   public static void main(String args[]) {
      int x=10, y=20, z=30;

      if (x<y) {
         System.out.println("Washington");
      } else if ((x+y)%2==0) {
         System.out.println("Adams");
      } else if (z-2 < y+1) {
         System.out.println("Jefferson");
      } else {
         System.out.println("Madison");
      }
   }
}
```

53. [1 point] What is the output of this code?

```
public class Presidents {
   public static void main(String args[]) {
      int x=10, y=20, z=30;

      if (x<y) {
         System.out.println("Washington");
      } if ((x+y)%2==0) {
         System.out.println("Adams");
      } else if (z-2 < y+1) {
         System.out.println("Jefferson");
      } else {
         System.out.println("Madison");
      }
   }
}
```

54. [1 point] What is the output of this code?

```
public class Presidents {
   public static void main(String args[]) {
      int x=10, y=20, z=30;

      if (x<y) {
         System.out.println("Washington");
      } else if ((x+y)%2==0) {
          if (z>=30 || z<=30) {
             System.out.print("(not Quincy) ");
          }
         System.out.println("Adams");
      } else if (z-2 < y+1) {
         System.out.println("Jefferson");
      } else {
         System.out.println("Madison");
      }
   }
```

55. [1 point] What is the output of this code?

```
public class Presidents {
   public static void main(String args[]) {
      int x=10, y=20, z=30;

      if (x<y) {
         System.out.println("Washington");
      } if ((x+y)%2==0) {
         System.out.println("Adams");
      } else if (z-2 < y+1) {
         System.out.println("Jefferson");
      } else {
         if (x==10) {
            System.out.println("Madison");
```

```
         } else {
            System.out.println("Monroe");
         }
      }
   }
```

56. [1 point] What is the value of a, b, and c when the following code finishes?

```
int a=5, b=3, c=2;

if (c < a) {
    c-=a;
} else if (b < a) {
    b-=a;
}
if (a + b > c) {
    a+=10;
} else {
    b+=10;
}
```

57. [1 point] What is the value of a, b, and c when the following code finishes?

```
int a=1, b=2, c=3;

if (a * 2 < b) {
   a*=3;
   c-=b;
}
if (b < a) {
   b++;
} else {
   a--;
   c++;
}
```

58. [1 point] What is printed by the following?

```
for (int i=1; i<4; i++) {
  for (char c='a'; c<='c'; c++) {
     if (i%2==0) {
        i++;
        System.out.println(i + " " + c);
     } else {
        c++;
        System.out.println(c + " " + i);
     }
  }
}
```

59. [1 point] What is printed by the following?

```
String s1="bob";
String s2="lob";
String s3="law";

for (int i=0; i<4; i++) {
   if (i%2==0) {
      s1+=s2;
   } else {
      s2=s1+s3;
   }
}
System.out.println(s1);
```

60. [1 point] Is there a compiler error in this code? If so, what is it? If not, what's printed?

```
1  public class WhatsPrinted1 {
2      public static void func(int x) {
3          x++;
4      }
5
6      public static void main(String args[]) {
7          int y=10;
8
9          func(y);
10         System.out.println(y);
11     }
12 }
```

---

61. [1 point] Is there a compiler error in this code? If so, what is it? If not, what's printed?

```
public class WhatsPrinted2 {
    public static void func(int x) {
        x++;
        System.out.println(x);
    }

    public static void main(String args[]) {
        int y=10;

        func(y);
    }
}
```

---

62. [1 point] Is there a compiler error in this code? If so, what is it? If not, what's printed?

```
public class WhatsPrinted3 {
    public static void func(int x, int y, int z) {
        x++;
        y+=z%2;
        z*=2;
    }

    public static void main(String args[]) {
        int x=10, y=20, z=30;

        func(y, z, x);
        System.out.println(x);
    }
}

```

---

63. [1 point] Is there a compiler error in this code? If so, what is it? If not, what's printed?

```
public class WhatsPrinted4 {
    public static void func(int x, int y, int z) {
        x++;
        y+=z%2;
        z*=2;
        System.out.println(z);
    }

    public static void main(String args[]) {
        int x=10, y=20, z=30;

        func(y, z, x);
    }
}
```

---

64. [1 point] Is there a compiler error in this code? If so, what is it? If not, what's printed?

```
public class WhatsPrinted5 {
    public static int func(int x) {
        x*=2;
        return x;
    }

    public static void main(String args[]) {
        int x=10;

        func(x);
        System.out.println(x);
    }
}
```

---

65. [1 point] Is there a compiler error in this code? If so, what is it? If not, what's printed?

```
public class WhatsPrinted6 {
    public static int func(int x) {
        x*=2;
        return x;
    }

    public static void main(String args[]) {
        int x=10;

        x=func(x);
        System.out.println(x);
    }
}
```

---

66. [1 point] Is there a compiler error in this code? If so, what is it? If not, what's printed?

```
public class WhatsPrinted7 {
    public static void func(String base, String prefix, String suffix) {
        base = prefix+base+suffix;
    }

    public static void main(String args[]) {
        String r="ject";
        String p="con";
        String s="ure";

        func(r, p, s);
        System.out.println(r);
    }
}

```

---

67. [1 point] Is there a compiler error in this code? If so, what is it? If not, what's printed?

```
public class WhatsPrinted8 {
    public static String func(String base, String prefix, String suffix) {
        base = prefix+base+suffix;
        return base;
    }

    public static void main(String args[]) {
        String r="ject";
        String p="con";
        String s="ure";

        func(r, p, s);
        System.out.println(r);
    }
}

```

---

68. [1 point] Is there a compiler error in this code? If so, what is it? If not, what's printed?

```
public class WhatsPrinted9 {
    public static String func(String base, String prefix, String suffix) {
        base = prefix+base+suffix;
        return base;
    }

    public static void main(String args[]) {
        String r="ject";
        String p="con";
        String s="ure";

        r=func(r, p, s);
        System.out.println(r);
    }
}

```

---

69. [1 point] Is there a compiler error in this code? If so, what is it? If not, what's printed?

```
public class WhatsPrinted10 {
    public static void f1() {
        System.out.print("a");
    }

    public static void f2() {
        f1();
        System.out.print("b");
    }

    public static void f3() {
        f2();
        f1();
        System.out.print("c");
    }

    public static void main(String args[]) {
        f3();
        System.out.println();
    }
}

```

---

70. [3 points] Write the few lines of code that prints the first 50 perfect squares (1, 4, 9, 16, 25, 36, ...). You do not need to write a full program (*i.e.*, there's no need for `public class ...` or `public static void main ...`

71. [1 point] In the main function provided, write a program that asks the user to input two integers and prints out the first integer raised to the second (*e.g.* if the user enters 2 and 4, the program prints 16, which is 2^4). You do not have to write any imports or `public class ....` Please just fill in `main`.

```
public static void main(String args[]) {
```

72. [1 point] Write the few lines of code that print all of the integers between 5 and 1000 that are divisible by 6

- using a for loop
- using a while loop
- using a do-while loop

73. [1 point] Write a java program which asks the user to enter three integers. The program prints "between" if the 2nd number falls in between the 1st and 3rd, and "not between" if it doesn't. For example, if I enter 1 10 27, the program prints "between", and if I enter 5 9 6, the program prints "not between".

74. [1 point] Write the few lines of code that prompts the user to enter a series of exam scores, stopping when the user has entered an exam score < 0. The program then prints the highest, lowest, and average score or `no scores` if no scores have been entered.

75. [1 point] Write the few lines of code that prompts the user to enter a series of exam scores, stopping when the user has entered an exam score < 0. The program then prints average passing score, where passing is any grade $>= 70$. It should also print appropriate messages if no scores were entered or if scores were entered but none were passing.

76. [1 point] Write the few lines of code that prompts the user to enter a series of words, stopping when the user has entered the word "quit". The program should then print the length of the longest word entered or "no words entered" if no words other than "quit" were entered.

77. [1 point] Write a static method named `twoConsecutive` that accepts three integers as parameters and returns `true` if there is at least one pair of integers that differ by exactly 1. For example, the integers 3 and 4 differ by 1. The integers 12 and 11 also differ by 1.

    Your method should return false if there are no such consecutive values. The integers could be passed in any order; the two consecutive values could be any of the two values passed in.

    Here are some sample calls:

Call	**Output**
`twoConsecutive(1, 2, 12)`	`true`
`twoConsecutive(1, 12, 2)`	`true`
`twoConsecutive(2, 12, 1)`	`true`
`twoConsecutive(4, 5, 3)`	`true`
`twoConsecutive(2, 4, 6)`	`false`
`twoConsecutive(8, 8, 8)`	`false`

78. Write a method which is passed a String. The method returns the number of vowels it contains.

79. Write a method which is passed a String. The method returns a new String which is the same as the original, except that with every letter repeated. For example, if the method is passed the String "mayo", the method returns the string "mmaayyoo".

80. Write a method which is passed a String. The method returns `true` if the string is a double-word (e.g., `murmur`, `couscous`) or `false` otherwise.

81. Write a method which is passed a String. The function returns a new String which is the same as the original but with all of the space characters removed.