1) Warm-up
Write a program that plays a short game of mad libs: ask for three words and fill them in a sentence.
(E.g., Ze verb the adjective noun.)

2) Boolean expression validity
Which of the following are valid boolean expressions?
a. True
b. "True"
c. 1 < 2
d. 3 = 3
e. 4 >= 4

3) Logical operators
What does each of the following boolean expressions evaluate to?
a. True and False
b. False or False
c. True and not False
d. not True or not False
e. True or False and False
f. (True or False) and False
4) Boolean expressions
Assume the following assignment statements have been executed:
x = -2
y = 0
z = 5
What does each of these boolean expressions evaluate to? If it is an invalid boolean expression, say why.
   a. x < 0 and y < 0
   b. z == 4 or 5
   c. z > 3 and z < 7
   d. y not == 0
   e. x < y or (z >= 0 and y <= 5)
   f. x + y < z
   g. x > y == False
   h. "a" < "b"
   i. "b" < "C"

5) Conditional statements
What output is produced by each of the following programs?
   a. groundhog_saw_shadow = True
      if (groundhog_saw_shadow):
         print("6 more weeks of winter!")
      else:
         print("Spring is here!")
         print("Are you sure?")
   b. looks_like_duck = True
      quacks_like_duck = True
      print("What do you think?")
      if (looks_like_duck and quacks_like_duck):
         print("It's probably a duck")
      print("It's not a duck")
   c. hour = 12
      if (hour == 12):
         print("noon")
      if (hour > 12):
         print("AM")
      else:
         print("PM")
d. cost = 200
   refund = 3
   if (cost > 100):
       refund = 10
   refund = refund * 2
   print(refund)

6) Conditional statements
For each program, specify the range of values for x and y that will cause the program to output Yes.
   a. if (x < 0 and y > 0):
       print("Yes")
       else:
       print("No")

   b. if (x > 10 and x < 50 and y == 100):
       print("Yes")
       Else:
       print("No")

   c. if (x == 1 and y == 2):
       print("No")
       print("Yes")

7) Programming practice
   a. Write a program that asks for a year and outputs ‘Before’ or ‘After’ depending on whether the provided year comes before or after 2018.
   b. Write a program that asks for yesterday’s and today’s temperature and outputs ‘Today is warmer’, ‘Today is colder’, or ‘Today is the same’.