1. Define a list = [ 1, 2, 3, 4, 5, 6]
2. Define a list =
3. Convert *x* to a numpy array: *npx* = . Print its shape.
4. Reshape *npx* to an array: [ 1, 2, 3, 4, 5, 6]. Print its shape.
5. Reshape *npx* to a array: . Print its shape.
6. Define a array *npx2* =
7. Reshape to a array
8. Convert list *x* = to tensor *tx*= . Print its shape.
9. Reshape *tx* to . Print its shape.
10. Convert numpy array to tensor *tx*.
11. Get the numpy array from tensor *tx*=.
12. Define two tensors, *t*, and *t*. Calculate matrix multiplication . Print the shape of , , and .
13. Explain the meaning of . Print the shape of . What is the difference between and .
14. Convert a tensor to a variable . Print the shape of *vx*.
15. Define a variable with gradient.

For problem 16-19, let *x* be a 22 variable whose values are random numbers drawn from *N* (0,1), and , and . Print out your results.

1. What are the gradient values of *x*, *y* and *z*.
2. What are the gradient values of *x*, *y* and *z* after *z*( ) ?
3. What’s the difference between *z*.backward () and *z*.backward ([0.5, 0.8])?
4. What does *z*.grad.data.zero( ) mean?