1) What is the definition of an orthogonal complement?

A) A subspace W of a vector space V is an orthogonal complement of V if W is orthogonal to V.

B) A subspace W of a vector space V is an orthogonal complement of V if W is a subset of V.

C) A subspace W of a vector space V is an orthogonal complement of V if W is a subspace of V that is orthogonal to V.

D) A subspace W of a vector space V is an orthogonal complement of V if W is a subspace of V that is not orthogonal to V.

2) Which of the following is not a property of an orthogonal complement?

A) W is a subspace of V.

B) W is orthogonal to V.

C) W is a subset of V.

D) W is a subspace of V that is orthogonal to V.

3) Which of the following is not true about an orthogonal complement?

A) Every vector space has an orthogonal complement.

B) Every subspace of a vector space has an orthogonal complement.

C) The orthogonal complement of a subspace is a subspace.

D) The orthogonal complement of a vector space is a vector space.

4) Which of the following is not an example of an orthogonal complement?

A) The set of all vectors in R3 that are orthogonal to the x-axis.

B) The set of all vectors in R3 that are orthogonal to the y-axis.

C) The set of all vectors in R3 that are orthogonal to the z-axis.

D) The set of all vectors in R3 that are orthogonal to the x-y plane.

5) Which of the following is not an example of an orthogonal complement?

A) The set of all vectors in R4 that are orthogonal to the x-axis.

B) The set of all vectors in R4 that are orthogonal to the y-axis.

C) The set of all vectors in R4 that are orthogonal to the z-axis.

D) The set of all vectors in R4 that are orthogonal to the x-y plane.

6) Which of the following is not an example of an orthogonal complement?

A) The set of all vectors in R5 that are orthogonal to the x-axis.

B) The set of all vectors in R5 that are orthogonal to the y-axis.

C) The set of all vectors in R5 that are orthogonal to the z-axis.

D) The set of all vectors in R5 that are orthogonal to the x-y plane.

7) Which of the following is not an example of an orthogonal complement?

A) The set of all vectors in R6 that are orthogonal to the x-axis.

B) The set of all vectors in R6 that are orthogonal to the y-axis.

C) The set of all vectors in R6 that are orthogonal to the z-axis.

D) The set of all vectors in R6 that are orthogonal to the x-y plane.

8) Which of the following is not an example of an orthogonal complement?

A) The set of all vectors in R7 that are orthogonal to the x-axis.

B) The set of all vectors in R7 that are orthogonal to the y-axis.

C) The set of all vectors in R7 that are orthogonal to the z-axis.

D) The set of all vectors in R7 that are orthogonal to the x-y plane.

9) Which of the following is not an example of an orthogonal complement?

A) The set of all vectors in R8 that are orthogonal to the x-axis.

B) The set of all vectors in R8 that are orthogonal to the y-axis.

C) The set of all vectors in R8 that are orthogonal to the z-axis.

D) The set of all vectors in R8 that are orthogonal to the x-y plane.

10) Which of the following is not an example of an orthogonal complement?

A) The set of all vectors in R9 that are orthogonal to the x-axis.

B) The set of all vectors in R9 that are orthogonal to the y-axis.

C) The set of all vectors in R9 that are orthogonal to the z-axis.

D) The set of all vectors in R9 that are orthogonal to the x-y plane.

11) Which of the following is not an example of an orthogonal complement?

A) The set of all vectors in R10 that are orthogonal to the x-axis.

B) The set of all vectors in R10 that are orthogonal to the y-axis.

C) The set of all vectors in R10 that are orthogonal to the z-axis.

D) The set of all vectors in R10 that are orthogonal to the x-y plane.

12) Which of the following is not an example of an orthogonal complement?

A) The set of all vectors in R11 that are orthogonal to the x-axis.

B) The set of all vectors in R11 that are orthogonal to the y-axis.

C) The set of all vectors in R11 that are orthogonal to the z-axis.

D) The set of all vectors in R11 that are orthogonal to the x-y plane.

13) Which of the following is not an example of an orthogonal complement?

A) The set of all vectors in R12 that are orthogonal to the x-axis.

B) The set of all vectors in R12 that are orthogonal to the y-axis.

C) The set of all vectors in R12 that are orthogonal to the z-axis.

D) The set of all vectors in R12 that are orthogonal to the x-y plane.

14) Which of the following is not an example of an orthogonal complement?

A) The set of all vectors in R13 that are orthogonal to the x-axis.

B) The set of all vectors in R13 that are orthogonal to the y-axis.

C) The set of all vectors in R13 that are orthogonal to the z-axis.

D) The set of all vectors in R13 that are orthogonal to the x-y plane.

15) Which of the following is not an example of an orthogonal complement?

A) The set of all vectors in R14 that are orthogonal to the x-axis.

B) The set of all vectors in R14 that are orthogonal to the y-axis.

C) The set of all vectors in R14 that are orthogonal to the z-axis.

D) The set of all vectors in R14 that are orthogonal to the x-y plane.

16) Which of the following is not an example of an orthogonal complement?

A) The set of all vectors in R15 that are orthogonal to the x-axis.

B) The set of all vectors in R15 that are orthogonal to the y-axis.

C) The set of all vectors in R15 that are orthogonal to the z-axis.

D) The set of all vectors in R15 that are orthogonal to the x-y plane.

17) Which of the following is not an example of an orthogonal complement?

A) The set of all vectors in R16 that are orthogonal to the x-axis.

B) The set of all vectors in R16 that are orthogonal to the y-axis.

C) The set of all vectors in R16 that are orthogonal to the z-axis.

D) The set of all vectors in R16 that are orthogonal to the x-y plane.

18) Which of the following is not an example of an orthogonal complement?

A) The set of all vectors in R17 that are orthogonal to the x-axis.

B) The set of all vectors in R17 that are orthogonal to the y-axis.

C) The set of all vectors in R17 that are orthogonal to the z-axis.

D) The set of all vectors in R17 that are orthogonal to the x-y plane.

19) Which of the following is not an example of an orthogonal complement?

A) The set of all vectors in R18 that are orthogonal to the x-axis.

B) The set of all vectors in R18 that are orthogonal to the y-axis.

C) The set of all vectors in R18 that are orthogonal to the z-axis.

D) The set of all vectors in R18 that are orthogonal to the x-y plane.

20) Which of the following is not an example of an orthogonal complement?

A) The set of all vectors in R19 that are orthogonal to the x-axis.

B) The set of all vectors in R19 that are orthogonal to the y-axis.

C) The set of all vectors in R19 that are orthogonal to the z-axis.

D) The set of all vectors in R19 that are orthogonal to the x-y plane.

21) Which of the following is not an example of an orthogonal complement?

A) The set of all vectors in R20 that are orthogonal to the x-axis.

B) The set of all vectors in R20 that are orthogonal to the y-axis.

C) The set of all vectors in R20 that are orthogonal to the z-axis.

D) The set of all vectors in R20 that are orthogonal to the x-y plane.

22) Which of the following is not an example of an orthogonal complement?

A) The set of all vectors in R21 that are orthogonal to the x-axis.

B) The set of all vectors in R21 that are orthogonal to the y-axis.

C) The set of all vectors in R21 that are orthogonal to the z-axis.

D) The set of all vectors in R21 that are orthogonal to the x-y plane.

23) Which of the following is not an example of an orthogonal complement?

A) The set of all vectors in R22 that are orthogonal to the x-axis.

B) The set of all vectors in R22 that are orthogonal to the y-axis.

C) The set of all vectors in R22 that are orthogonal to the z-axis.

D) The set of all vectors in R22 that are orthogonal to the x-y plane.

24) Which of the following is not an example of an orthogonal complement?

A) The set of all vectors in R23 that are orthogonal to the x-axis.

B) The set of all vectors in R23 that are orthogonal to the y-axis.

C) The set of all vectors in R23 that are orthogonal to the z-axis.

D) The set of all vectors in R23 that are orthogonal to the x-y plane.

25) Which of the following is not an example of an orthogonal complement?

A) The set of all vectors in R24 that are orthogonal to the x-axis.

B) The set of all vectors in R24 that are orthogonal to the y-axis.

C) The set of all vectors in R24 that are orthogonal to the z-axis.

D) The set of all vectors in R24 that are orthogonal to the x-y plane.

1) C
2) D
3) B
4) D
5) D
6) D
7) D
8) D
9) D
10) D
11) D
12) D
13) D
14) D
15) D
16) D
17) D
18) D
19) D
20) D
21) D
22) D
23) D
24) D
25) D