4

Mathematics 4
Microlearning Module

QUARTER 3 – Module 4

Generating Equivalent Fractions Using Models

MLM
Microlearning Module

REGION XII - DIVISION OF SULTAN KUDARAT

Mathematics 4
Microlearning Module (MLM)
Quarter 3 – Module 4: Generating Equivalent Fractions Using Models.
First Edition, 2024

Published by the Department of Education- RO XII, Division of Sultan Kudarat

MICROLEARNING MODULE

Name: _____ Grade & Sec: _____ Score: _____

Subject: _____Mathematics 4_____ Quarter: _____3_____ MLM No.:__4__

Teacher: _____
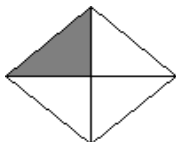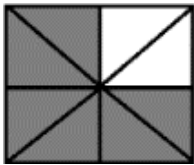
Competency: Generate equivalent fractions using models.

A. Look Back!
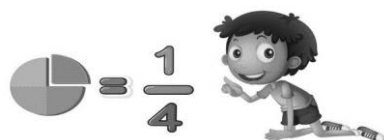
Directions: Box the letter of your best answer.

What part of the whole is the shaded part?

1.	A. $\dfrac{1}{2}$ B. $\dfrac{1}{4}$ C. $\dfrac{2}{4}$ D. $\dfrac{3}{4}$
2.	A. $\dfrac{2}{4}$ B. $\dfrac{2}{5}$ C. $\dfrac{2}{6}$ D. $\dfrac{2}{7}$
3.	A. $\dfrac{1}{3}$ B. $\dfrac{1}{4}$ C. $\dfrac{2}{4}$ D. $\dfrac{3}{4}$
4.	A. $\dfrac{1}{4}$ B. $\dfrac{3}{4}$ C. $\dfrac{2}{6}$ D. $\dfrac{3}{8}$
5.	A. $\dfrac{1}{2}$ B. $\dfrac{1}{3}$ C. $\dfrac{3}{6}$ D. $\dfrac{5}{6}$

B. What's New?

1. Have you been to a bakeshop?

2. What were the things that you buy? How much did you pay for?
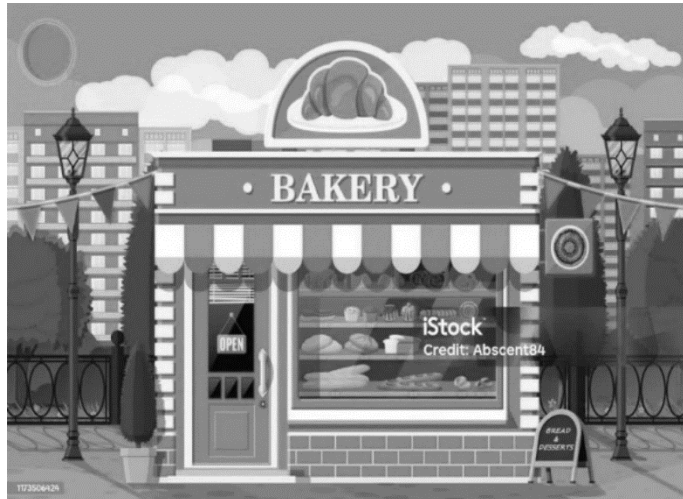
C. What Is It?

How do we generate equivalent fractions?
Look at the diagram below:

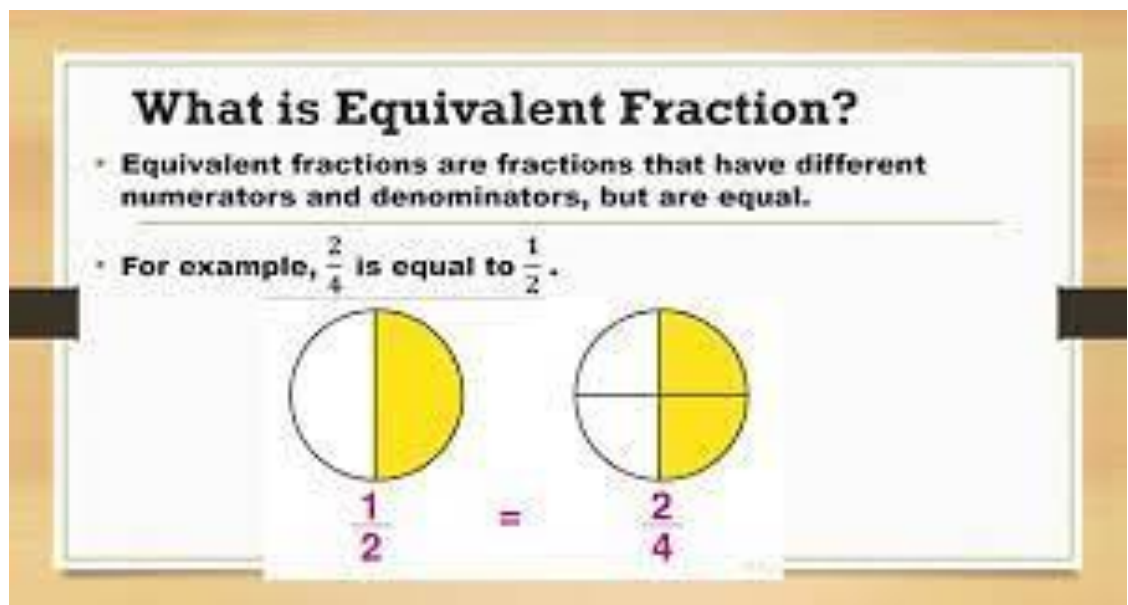We can generate equivalent fractions from the diagram by drawing a line that passes through the center and counting the number of parts shaded out of the total parts again.

In the first drawing 1 shaded part out of 2 parts is represented as $\frac{1}{2}$. The same drawing was used when a line was used to divide both parts equally and we came up with 2 shaded parts out of 4 parts translated as $\frac{2}{4}$. We were able to generate equivalent fractions $\frac{1}{2}$ and $\frac{2}{4}$ by dividing the parts equally and counting the parts afterward.

**For another example, read and analyze the problem.**
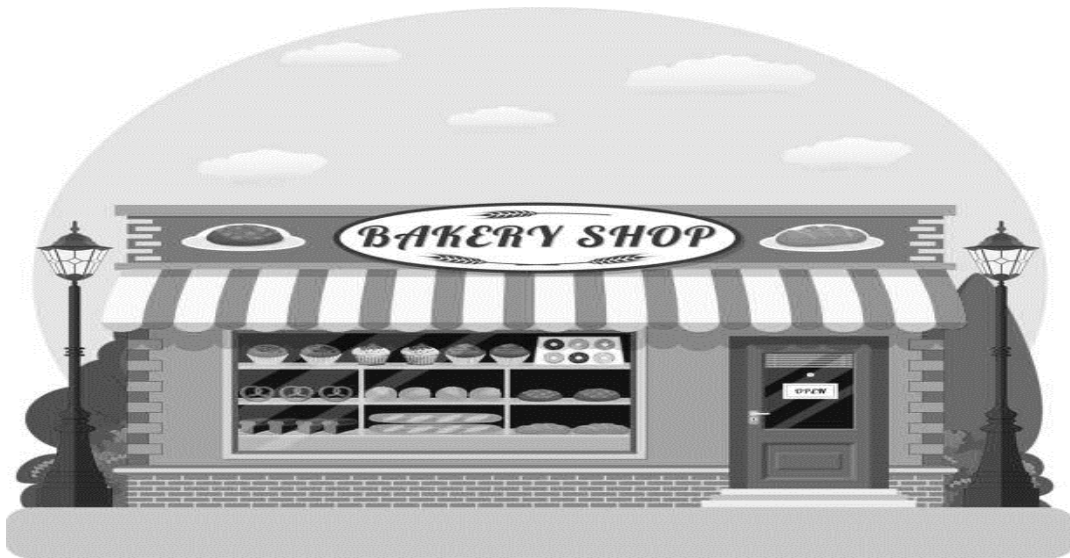
> Randy went to a bakeshop. He bought 10 boxes of cakes to be given away on his birthday. He gave 7 boxes to his friends. What part of the total number of boxes of cakes was given to his friends? What trait did Randy show?

How will you answer the question in the problem?

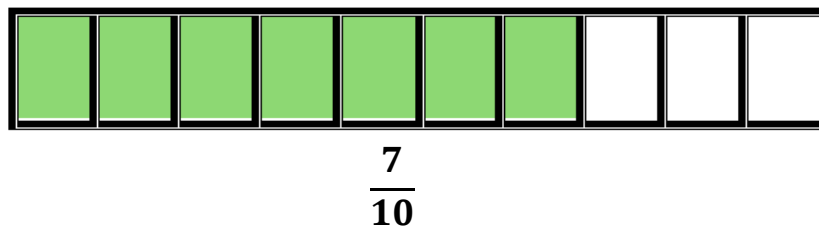To visualize the problem, we are going to use examples.

Example #1 Use blocks or cubes

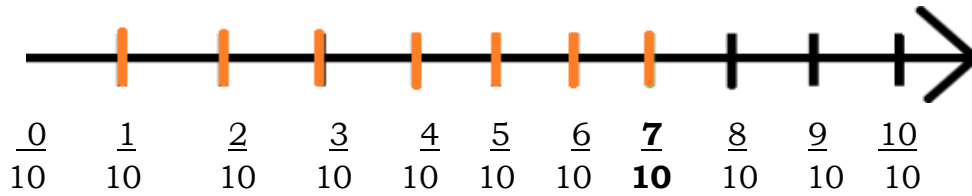Let us color the cubes to visualize 7 out of 10 boxes of cake given to Randy's friends.

$$\frac{7}{10}$$
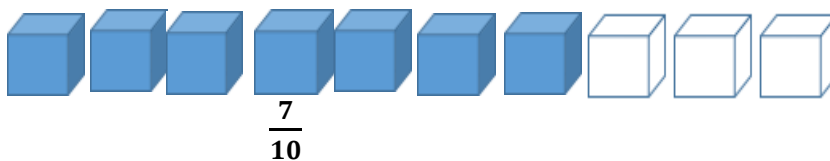
Example #2 Use of grids

We color the grid to visualize 7 out of 10 boxes of cake given away to Randy's friend.
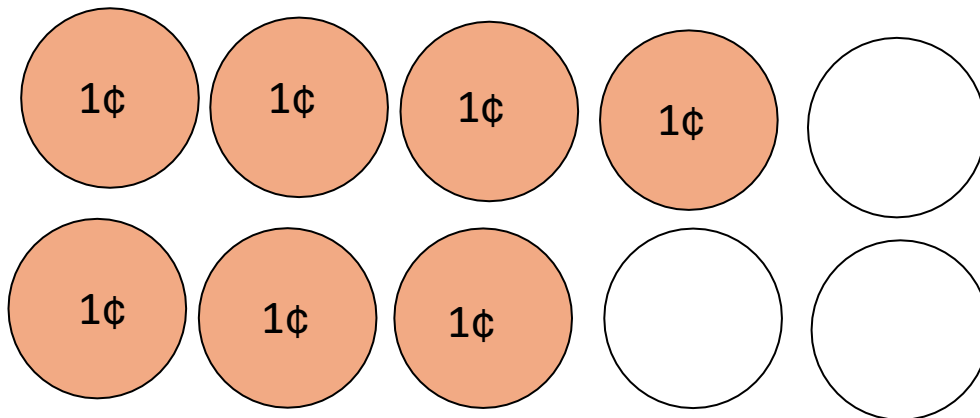

$$\frac{7}{10}$$

Example # 3 Use of number line

Look at the drawing below. Color the post to materialize 7 out of the 10 boxes of cake given to Randy's friends.

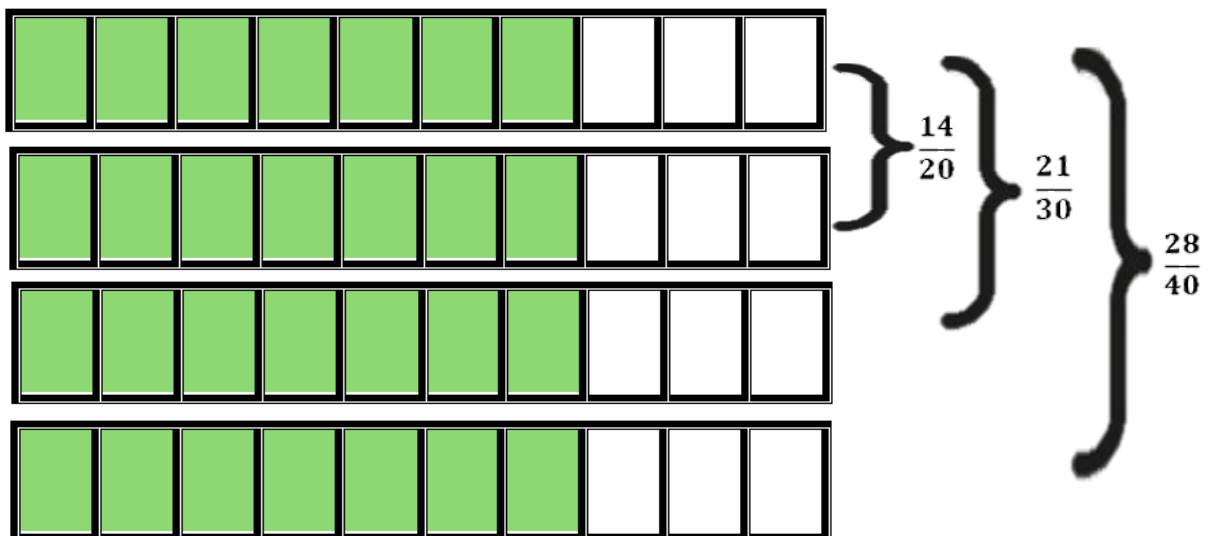| $\frac{0}{10}$ | $\frac{1}{10}$ | $\frac{2}{10}$ | $\frac{3}{10}$ | $\frac{4}{10}$ | $\frac{5}{10}$ | $\frac{6}{10}$ | $\mathbf{\frac{7}{10}}$ | $\frac{8}{10}$ | $\frac{9}{10}$ | $\frac{10}{10}$ |

Example # 4 Use of money

Note that there are only 7 centavos out of the slots for 10 centavos

Each example showed $\frac{7}{10}$. We can generate equivalent fractions out of any diagram by simply repeating it the number of times we desire.
Look at our example below:

$$\frac{14}{20} \quad \frac{21}{30} \quad \frac{28}{40}$$

Out of our grids, we can say that $\frac{7}{10} = \frac{14}{20} = \frac{21}{30} = \frac{28}{40}$. They are all equivalent fractions. We can also generate equivalent fractions by repeating our drawings and counting the parts.

D. Let's try!

Directions: Draw any model like a number line, block, grid, or money that represents each fraction given. From each model, generate at least two equivalent fractions. Do this in your answer sheet.

1.) $\frac{2}{5}$

2.) $\frac{1}{4}$

3.) $\frac{2}{3}$

4.) $\frac{3}{8}$

5.) $\frac{5}{6}$

E. Let's Evaluate!
Directions: Write the letter of the correct answer.

1. Which of the following shows $\frac{4}{10}$ of the sets of blocks?
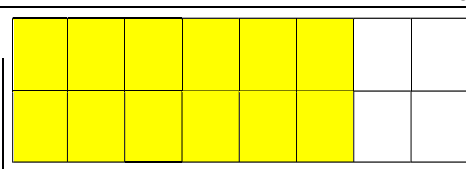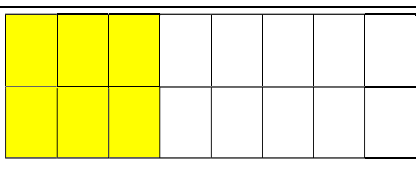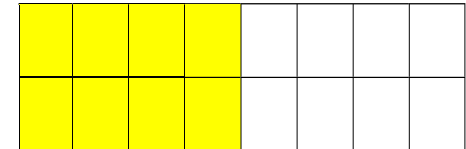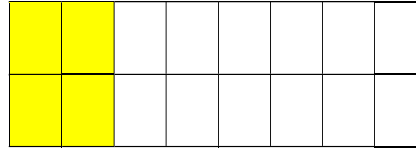
A.

B.

C.

D.

2. Which of the following shows $\frac{1}{4}$ of the set of gift boxes?
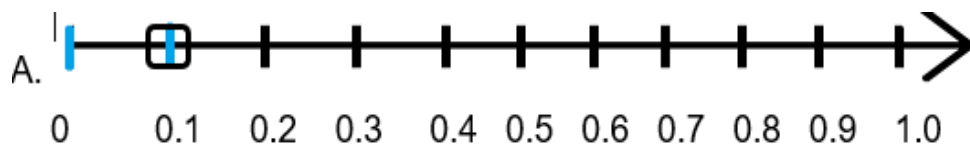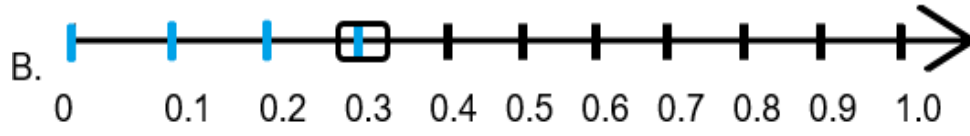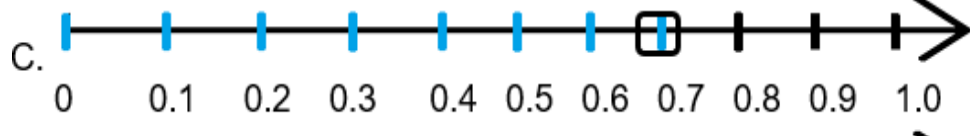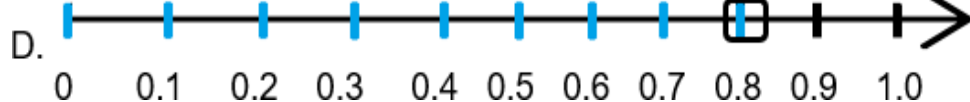
A.   C.

B.   D.

3. Which of the following shows $\frac{6}{10}$ of the sets of grids?

A.

B.

C.

D.

4. Which of the following represents $\frac{3}{8}$ of the sets of grids?

A.   B.

C.   D.

5. Which of the following shows $\frac{3}{10}$?

A.

0   0.1   0.2   0.3   0.4   0.5   0.6   0.7   0.8   0.9   1.0

B.

0   0.1   0.2   0.3   0.4   0.5   0.6   0.7   0.8   0.9   1.0

C.

0   0.1   0.2   0.3   0.4   0.5   0.6   0.7   0.8   0.9   1.0

D.

0   0.1   0.2   0.3   0.4   0.5   0.6   0.7   0.8   0.9   1.0

For numbers 6-10, identify the part of the whole represented by the shaded part.

6.

A. $\frac{4}{10}$ B. $\frac{6}{10}$ C. $\frac{8}{10}$ D. $\frac{9}{10}$

7.

A. $\frac{2}{10}$ B. $\frac{3}{10}$ C. $\frac{4}{10}$ D. $\frac{5}{10}$

8.

A. $\frac{1}{10}$ B. $\frac{3}{10}$ C. $\frac{5}{10}$ D. $\frac{7}{10}$

9.

A. $\frac{9}{10}$ B. $\frac{8}{10}$ C. $\frac{7}{10}$ D. $\frac{6}{10}$

10.

A. $\frac{1}{10}$ B. $\frac{2}{10}$ C. $\frac{3}{10}$ D. $\frac{7}{10}$
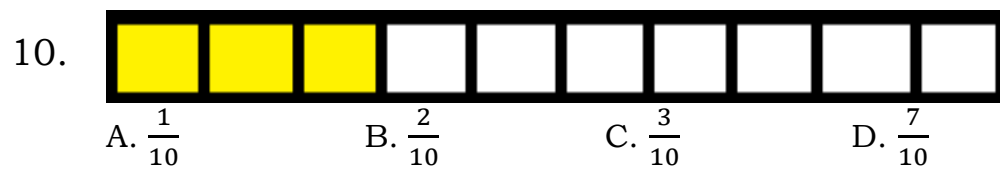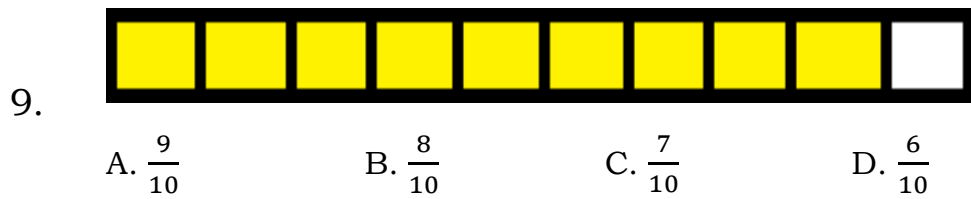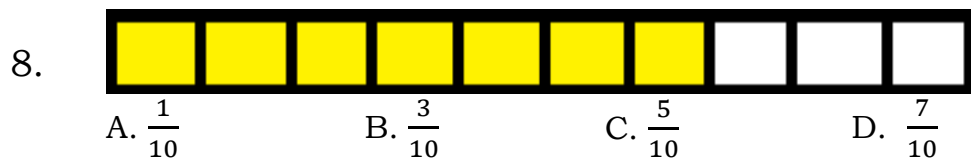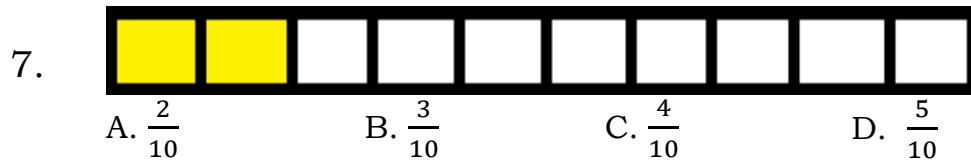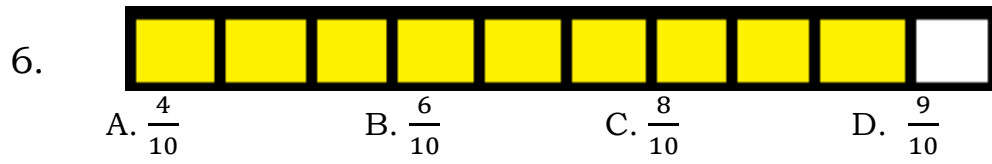
Challenge!

Directions: Match the following models from column A with the fractions in column B.

A   **B**

1.

                                                       a. $\dfrac{9}{10}$

2.

        b. $\dfrac{4}{10}$

3.

        c. $\dfrac{6}{10}$

4.

        d. $\dfrac{7}{10}$

        e. $\dfrac{8}{10}$

5.
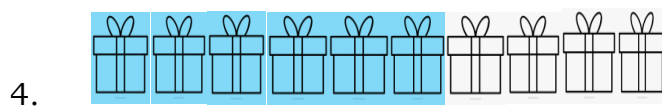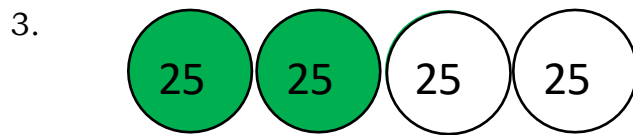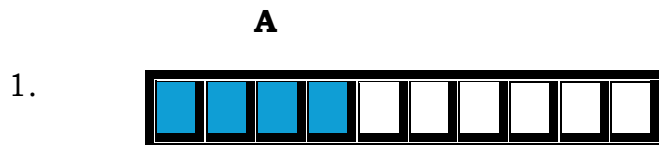
        f. $\dfrac{5}{10}$

F. References

Chingcuangco, Ofelia G. Soaring High with Mathematics 4: Textbook. Valenzuela City: Saint Matthew's Publishing, 2019.

Tabilang, A. R., Ian Jay B. Arce, and R. V. Pascua. Mathematics 4 Learner's Materials. Pasig City: Department of Education, 2015.

"Mathematics Background Design." Google Images. Accessed October 15, 2024. https://www.google.com/search?q=images+mathematics+background+design&oq=&gs_lcrp=EgZjaHJvbWUqCQgDEEUYOxjCAzIJCAAQRRg7GMIDMgkIARBFGDsYwgMyCQgCEEUYOxjCAzIJCAMQRRg7GMIDMgkIBBBFGDsYwgMyCQgFEEUYOxjCAzIJCAYQRRg7GMIDMgkIBxBFGDsYwgPSAQwxMTYzNTIyMGowajeoAgiwAgE&sourceid=chrome&ie=UTF-8&safe=active&ssui=on#ip=1.

REGION XII - DIVISION OF SULTAN KUDARAT

Answer Key - LC 4

Look Back

1. B
2. A
3. D
4. B
5. D

Let's Try

Answers may vary

Let's Evaluate

1. C
2. A
3. C
4. B
5. B
6. D
7. A
8. D
9. A
10. C

Challenge

1. B
2. E/D
3. F
4. C
5. A