MATHEMATICS 5

ESTIMATION OF FRACTIONS

Revised 2010
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DepEd - Division of Negros Occidental
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in Selected Provinces in the Visayas (STRIVE).

ESTIMATION OF FRACTIONS

Objective: Estimate fractions as close to 0, $\dfrac{1}{2}$ or 1

Review

Round off the numbers in Column A. Look for the answer in Column B.

A

B

1)   27

90

2)   21

30

3)   43

20

4)   12

40

5)   94

10
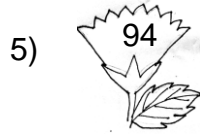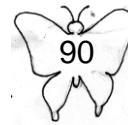
Estimating fractions is not entirely new to you.

a. Look at the number line below.

$$0 \qquad\qquad \frac{1}{2} \qquad\qquad 1$$

$$0 \quad \frac{1}{7} \quad \frac{2}{7} \quad \frac{3}{7} \quad \frac{4}{7} \quad \frac{5}{7} \quad \frac{6}{7} \quad \frac{7}{7}$$
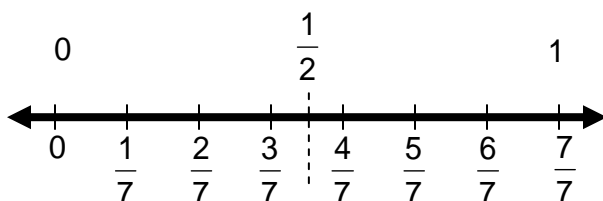
Which fractions are close to 0, $\frac{1}{2}$ or 1?

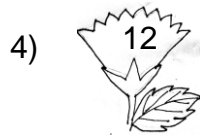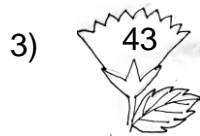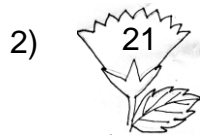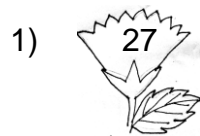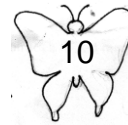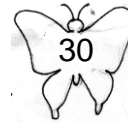- $\frac{1}{7}$ and $\frac{2}{7}$ are close to 0. The numerators 1 and 2 are very small compared to the denominator.
- $\frac{3}{7}$ and $\frac{4}{7}$ are close to $\frac{1}{2}$. The numerator 3 is about half of 7. 4 is more than half but not nearly equal to 7.
- $\frac{5}{7}$ and $\frac{6}{7}$ are close to 1. Their numerator and denominator are nearly equal. 5 and 6 are nearly equal to 7.

b. Let's try another example.

$$0 \qquad\qquad \frac{1}{2} \qquad\qquad 1$$

$$0 \quad \frac{1}{9} \quad \frac{2}{9} \quad \frac{3}{9} \quad \frac{4}{9} \quad \frac{5}{9} \quad \frac{6}{9} \quad \frac{7}{9} \quad \frac{8}{9} \quad \frac{9}{9}$$
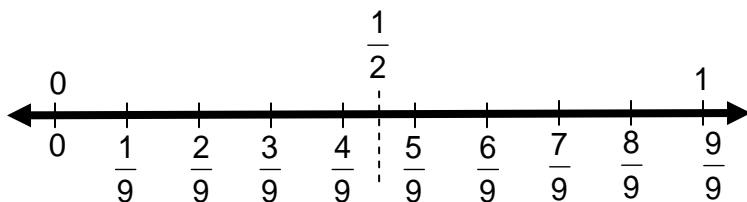
- Which fractions are close to 0? Why?

$\frac{1}{9}, \frac{2}{9}$ and $\frac{3}{9}$ are close to 0. The numerators 1, 2 and 3 are very small compared to the denominator 9.

- Which fractions are close to $\frac{1}{2}$? Why?

  $\frac{4}{9}, \frac{5}{9}$ and $\frac{6}{9}$ *are close to* $\frac{1}{2}$. *The numerator 4 is about half the denominator 9. The numerators 5 and 6 are more than half but not nearly equal to the denominator 9.*

- Which fractions are close to 1? Why?

  $\frac{7}{9}$ and $\frac{8}{9}$ *are close to 1. The numerators 7 and 8 are nearly equal to the denominator.*

c. Let's try estimating without using a number line.

- $\frac{2}{3}$ *is close to 1 because 2 is nearly equal to 3.*

- $\frac{3}{10}$ *is close to 0. The numerator 3 is very small compared to the denominator 10.*

- $\frac{5}{8}$ *is close to* $\frac{1}{2}$. *Why?*

Try These

Using the number line tell which fractions are close to 0, $\frac{1}{2}$ or 1.
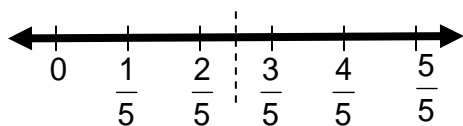
1. ____ is close to 0. The numerator ____ is very small compared to the denominator 5.

2. ____ are close to $\frac{1}{2}$. The numerators are ____ are about half the denominator.

3. ____ is close to 1. The numerator ____ is nearly equal to the denominator.

A fraction is close to:

- 0 when the numerator is very small compared to the denominator.
- $\dfrac{1}{2}$ when the denominator is about half the denominator.
- 1 when the numerator and the denominator are nearly equal.

On Your Own

A. Look at the number line. Write the correct answer on your notebook.

$$0 \quad \frac{1}{6} \quad \frac{2}{6} \quad \frac{3}{6} \quad \frac{4}{6} \quad \frac{5}{6} \quad \frac{6}{6}$$
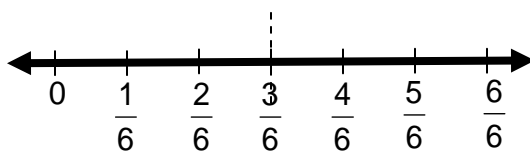
1. What fractions are close to 0?

2. What fractions are close to $\dfrac{1}{2}$?

3. What fractions are close to 1?

B. Choose the letter of the correct answer.

1. Which fraction is close to 0?

    a. $\dfrac{1}{10}$ b. $\dfrac{6}{8}$ c. $\dfrac{5}{7}$

2. ____ is close to $\dfrac{1}{2}$.

    a. $\dfrac{5}{6}$ b. $\dfrac{1}{5}$ c. $\dfrac{5}{9}$

3. $\dfrac{7}{8}, \dfrac{8}{9}$ and $\dfrac{9}{10}$ are close to 1. Which else is close to 1?

    a. $\dfrac{2}{7}$ b. $\dfrac{5}{7}$ c. $\dfrac{2}{5}$

Check your answer with the answer key.

If you get…

5-6   Excellent! You may now proceed to the next lesson.

3-4   You need to review the processes you missed.

0-2   You need to repeat the whole process. Ask your teacher or elder to help you.

Key to Correction
ESTIMATION OF FRACTIONS

REVIEW

1) b
2) c
3) d
4) e
5) a

TRY THESE

1) $\frac{1}{5}$, 1

2) $\frac{2}{5}$ and $\frac{3}{5}$, 2 and 3

3) $\frac{4}{5}$, 4

ON YOUR OWN

A.
1) $\frac{1}{6}$

2) $\frac{2}{6}$, $\frac{4}{6}$

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

B.
1) a
2) c
3) b