3.OA.A.3 Multiply and divide within 100 to solve contextual problems, with unknowns in all positions, in situations involving equal groups, arrays, and measurement quantities using strategies based on place value, the properties of operations, and the relationship between multiplication and division (e.g., contexts including computations such as 3 x ? = 24, 6 x 16 = ?, ? ÷ 8 = 3, or 96 ÷ 6 = ?)

Fill in the blank to make the equation true.

$9 \times \underline{\quad} = 63$

    a. 3
    b. 6
    c. 7
    d. 8

> **Progression**: Multiplication within 100 without context, unknown factor.

Fill in the blank to make the equation true.

$\underline{\quad} \div 4 = 13$

    a. 17
    b. 36
    c. 48
    d. 52

> **Progression**: Division within 100 without context, unknown dividend.

Isaac created 8 bracelets. Each of the bracelets required 9 inches of material. How much material did Isaac need to create all of the bracelets?

      a. 17 inches
      b. 63 inches
      c. 72 inches
      d. 89 inches

> **Progression**: Multiplication within 100 to solve contextual problems with an unknown product involving measurement quantities.

Ann read 84 pages over 7 days. If Ann read the same number of pages each day, how many pages did she read per day?

      a. 12
      b. 9
      c. 77
      d. 91

> **Progression**: Division within 100 to solve contextual problems with group size unknown involving equal groups.

3.NF.A.1 Understand a fraction, *1/b*, as the quantity formed by 1 part when a whole is partitioned into *b* equal parts (unit fraction); understand a fraction *a/b* as the quantity formed by *a* parts of size 1/b. *For example, ¾ represents a quantity formed by 3 parts of size 1/4.*

What part of the circle is red?

> **Progression**: Understand a unit fraction as the quantity formed by 1 part when a whole is portioned into equal parts. Name the fraction from a visual representation.
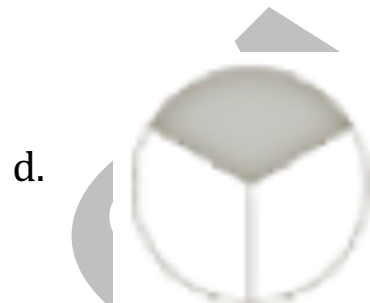
a. $\frac{1}{2}$

b. $\frac{1}{3}$

c. $\frac{1}{6}$

d. $\frac{1}{4}$

Select the image that does not show $\frac{1}{3}$ of the figure shaded.

a.

b.

c.

d.

Select the image that shows $\frac{3}{6}$ of the figure shaded.

a.

> **Progression**: Understand a fraction a/b as the quantity formed by a parts of size $1/b$. (Meaning of the denominator.)
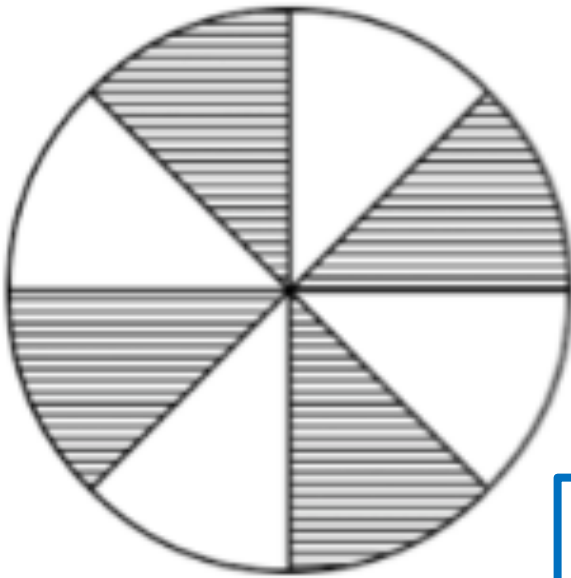
b.

c.

d.

    5

Describe the shaded part of the figure below.

Progression: Understand a fraction a/b as the quantity formed by a parts of size $1/b$. (Meaning of the numerator and denominator.)

a. 4 of the 8 equal sized pieces are shaded, representing the fraction $\frac{4}{8}$.

b. 4 of the 6 equal sized pieces are shaded, representing the fraction $\frac{4}{6}$.

c. 8 of the 4 equal sized pieces are shaded, representing the fraction $\frac{4}{8}$.

d. 6 of the 4 equal sized pieces are shaded, representing the fraction $\frac{4}{6}$.