BASIC
MATHEMATICS
CHARLES P. MCKEAGUE
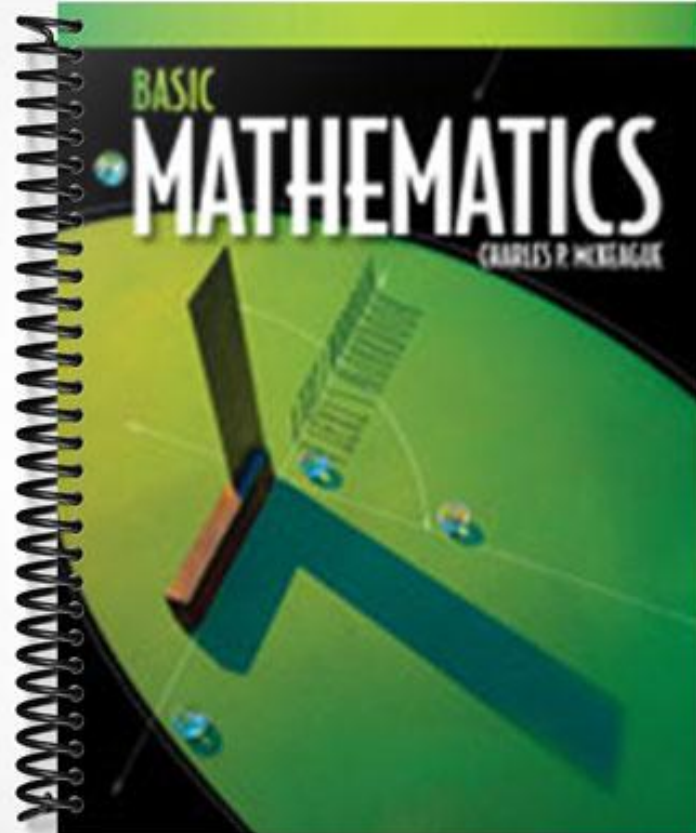
ch 02.01

Student: _____

1. Name the numerator of the fraction.

    $$\frac{1}{9}$$

    A. 9
    B. 1

2. Name the denominator of the fraction.

    $$\frac{3}{5}$$

    A. 3
    B. 5

3. What number is missed in the following table?

NUMERATOR	DENOMINATOR	FRACTION
7	8	$\frac{7}{8}$
?	7	$\frac{3}{7}$
x	y	$\frac{x}{y}$

    A. 3
    B. x
    C. 7

4. **Number of Children**

   If there are 3girls in a family with 7 children, then we say that $\dfrac{3}{7}$ of the children are girls. If there are

   6girls in a family with 7 children, what fraction of the children are girls?

   A. $\dfrac{6}{7}$

   B. 6
   C. 7
   D. $\dfrac{7}{7}$

   E. $\dfrac{7}{6}$

5. **Number of Students**

   In a class of 53 students, 21 are freshmen and 32 are juniors. What fraction of the students are freshmen?

   A. $\dfrac{53}{21}$

   B. $\dfrac{21}{53}$

   C. $\dfrac{53}{32}$

   D. $\dfrac{32}{53}$

6. Divide the numerator and the denominator of the following fraction by 2, to obtain an equivalent fraction.

$$\frac{10}{36}$$

A. $\frac{6}{19}$

B. $\frac{5}{18}$

C. $\frac{10}{18}$

D. $\frac{5}{36}$

7. Divide the numerator and the denominator of the following fraction by 3, to obtain an equivalent fraction.

$$\frac{21}{24}$$

A. $\frac{8}{9}$

B. $\frac{21}{8}$

C. $\frac{7}{24}$

D. $\frac{7}{8}$

8. Write the following fraction as an equivalent fraction with denominator 6.

$$\frac{7}{2}$$

A. $\frac{7}{6}$

B. $\frac{21}{6}$

C. $\frac{14}{6}$

D. $\frac{42}{6}$

9. Write the following fraction as an equivalent fraction with denominator 6.

$$\frac{65}{30}$$

A. $\frac{39}{6}$

B. $\frac{14}{6}$

C. $\frac{26}{6}$

D. $\frac{13}{6}$

10. Write the following fraction as an equivalent fraction with denominator 12.

$$\frac{1}{3}$$

A. $\dfrac{12}{12}$

B. $\dfrac{4}{12}$

C. $\dfrac{6}{12}$

D. $\dfrac{1}{12}$

11. Write the following fraction as an equivalent fraction with denominator $12x$.

$$\frac{17}{6}$$

A. $\dfrac{204x}{12x}$

B. $\dfrac{17}{12x}$

C. $\dfrac{17x}{12x}$

D. $\dfrac{34x}{12x}$

E. $\dfrac{34}{12x}$

12. Write the following fraction as an equivalent fraction with denominator $24a$.

$$\frac{17}{8}$$

    A. $\dfrac{51}{24a}$

    B. $\dfrac{18a}{24a}$

    C. $\dfrac{17a}{24a}$

    D. $\dfrac{51a}{24a}$

    E. $\dfrac{17}{24a}$

13. Write $\dfrac{2}{20}$ as an equivalent fraction with denominator 4,180.

    A. $\dfrac{418}{4,180}$

    B. $\dfrac{423}{4,180}$

    C. $\dfrac{428}{4,180}$

    D. $\dfrac{417}{4,180}$

    E. $\dfrac{420}{4,180}$

14. Find the missing term so that the two fractions are equal.

$$\frac{1}{3} = \frac{?}{294}$$

    A. 98
    B. 103
    C. 97
    D. 108
    E. 95

15. Find the missing term so that the two fractions are equivalent.

$$\frac{2}{9} = \frac{14}{?}$$

    A. 47
    B. 51
    C. 55
    D. 59
    E. 63

16. Find the missing term so that the two fractions are equivalent.

$$\frac{5}{4} = \frac{?}{12x}$$

    A. x
    B. $15x$
    C. 21
    D. $9x$
    E. 15

17. Simplify by dividing the numerator by the denominator.

$$\frac{18}{1}$$

A. 0
B. 1
C. 18

18. Simplify by dividing the numerator by the denominator.

$$\frac{17}{17}$$

A. 0
B. 17
C. 1

19. Name the denominator of the fraction.

6

A. 1
B. –2
C. 6
D. 7
E. –1

20. Name the numerator of the fraction.

10

A. 9
B. 11
C. 1
D. 12
E. 10

21. Simplify by dividing the numerator by the denominator.

$$\frac{30}{5}$$

A. 6
B. 5
C. $\frac{6}{5}$

D. $\frac{5}{30}$

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

22. Simplify by dividing the numerator by the denominator.

$$\frac{24}{8}$$

A. 8
B. $\frac{1}{3}$

C. $\frac{3}{8}$

D. 3
E. $\frac{8}{24}$

23. Find the missing term so that the two fractions are equal.

$$\frac{6}{19} = \frac{?}{1,653}$$

_____

24. Find the missing term so that the two fractions are equivalent.

$$\frac{7}{3} = \frac{35}{\rule{2em}{0.4pt}}$$

_____

25. Name the denominator of the fraction.

$$\frac{1}{6}$$

_____

26. Simplify by dividing the numerator by the denominator.

$$\frac{14}{1}$$

_____

27. Simplify by dividing the numerator by the denominator.

$$\frac{27}{27}$$

_____

28. Name the denominator of the fraction.

14

_____

29. Name the numerator of the fraction.

3

_____

30. Simplify by dividing the numerator by the denominator.

$$\frac{12}{3}$$

_____

31. Simplify by dividing the numerator by the denominator.

$$\frac{12}{6}$$

_____

32. Determine whether the following fractions are proper or improper.

Choose the correct letter for each question.

1. improper $\frac{5}{13}$ ____

2. proper $\frac{5}{3}$ ____

33. **Number of Children**

If there are 2girls in a family with 5 children, then we say that $\frac{2}{5}$ of the children are girls. If there are

1girl in a family with 5 children, what fraction of the children are girls?

34. **Number of Students**

In a class of 53 students, 21 are freshmen and 32 are juniors. What fraction of the students are freshmen?

35. Write the equivalent fraction with denominator 24 for the fraction $\frac{3}{8}$.

36. Divide the numerator and the denominator of the following fraction by 2, to obtain an equivalent fraction. Enter as an improper fraction where applicable.

$\frac{2}{4}$

37. Divide the numerator and the denominator of the following fraction by 3, to obtain an equivalent fraction. Enter as an improper fraction where applicable.

$$\frac{3}{48}$$

38. Write the following fraction as an equivalent fraction with denominator 6. Enter as an improper fraction where applicable.

$$\frac{5}{3}$$

39. Write the following fraction as an equivalent fraction with denominator 6. Enter as an improper fraction where applicable.

$$\frac{92}{24}$$

40. Write the following fraction as an equivalent fraction with denominator 12. Enter as an improper fraction where applicable.

$$\frac{1}{3}$$

41. Write the following fraction as an equivalent fraction with denominator $12x$.

$$\frac{5}{4}$$

42. Write the following fraction as an equivalent fraction with denominator $24a$. Enter as an improper fraction where applicable.

$$\frac{11}{4}$$

43. Write $\frac{1}{3}$ as an equivalent fraction with denominator 711. Enter as an improper fraction where

applicable.

44. Choose the correct statement(s).

a. $\dfrac{5}{9} = \dfrac{5+3}{9+3}$

b. $\dfrac{5}{9} = \dfrac{5 \cdot 3}{9 \cdot 3}$

Answer *a* or *b* or *both*.

45. Choose the correct statement(s).

a. $\dfrac{8}{9} = \dfrac{8+z}{9+z}$ for any value of z

b. $\dfrac{8}{9} = \dfrac{8 \cdot z}{9 \cdot z}$ for any nonzero value of z

Answer *a* or *b* or *both*.

46. Find the missing term so that the two fractions are equivalent.

$$\frac{3}{5} = \frac{\rule{1cm}{0pt}}{35x}$$

ch 02.01 Key

1.   Name the numerator of the fraction.

$$\frac{1}{9}$$

A. 9
B. 1

2.   Name the denominator of the fraction.

$$\frac{3}{5}$$

A. 3
B. 5

3.   What number is missed in the following table?

NUMERATOR	DENOMINATOR	FRACTION
7	8	$\frac{7}{8}$
?	7	$\frac{3}{7}$
x	y	$\frac{x}{y}$

A. 3
B. x
C. 7

4.   **Number of Children**

If there are 3girls in a family with 7 children, then we say that $\frac{3}{7}$ of the children are girls. If there are

6girls in a family with 7 children, what fraction of the children are girls?

A. $\frac{6}{7}$

B. 6
C. 7
D. $\frac{7}{7}$

E. $\frac{7}{6}$

5.   **Number of Students**

In a class of 53 students, 21 are freshmen and 32 are juniors. What fraction of the students are freshmen?

A. $\frac{53}{21}$

B. $\frac{21}{53}$

C. $\frac{53}{32}$

D. $\frac{32}{53}$

6. Divide the numerator and the denominator of the following fraction by 2, to obtain an equivalent fraction.

$$\frac{10}{36}$$

A. $\frac{6}{19}$

B. $\frac{5}{18}$

C. $\frac{10}{18}$

D. $\frac{5}{36}$

7. Divide the numerator and the denominator of the following fraction by 3, to obtain an equivalent fraction.

$$\frac{21}{24}$$

A. $\frac{8}{9}$

B. $\frac{21}{8}$

C. $\frac{7}{24}$

D. $\frac{7}{8}$

8.　　Write the following fraction as an equivalent fraction with denominator 6.

$$\frac{7}{2}$$

A. $\frac{7}{6}$

B. $\frac{21}{6}$

C. $\frac{14}{6}$

D. $\frac{42}{6}$

9.　　Write the following fraction as an equivalent fraction with denominator 6.

$$\frac{65}{30}$$

A. $\frac{39}{6}$

B. $\frac{14}{6}$

C. $\frac{26}{6}$

D. $\frac{13}{6}$

10. Write the following fraction as an equivalent fraction with denominator 12.

$$\frac{1}{3}$$

A. $\dfrac{12}{12}$

B. $\dfrac{4}{12}$

C. $\dfrac{6}{12}$

D. $\dfrac{1}{12}$

11. Write the following fraction as an equivalent fraction with denominator $12x$.

$$\frac{17}{6}$$

A. $\dfrac{204x}{12x}$

B. $\dfrac{17}{12x}$

C. $\dfrac{17x}{12x}$

D. $\dfrac{34x}{12x}$

E. $\dfrac{34}{12x}$

12. Write the following fraction as an equivalent fraction with denominator $24a$.

$$\frac{17}{8}$$

A. $\dfrac{51}{24a}$

B. $\dfrac{18a}{24a}$

C. $\dfrac{17a}{24a}$

D. $\dfrac{51a}{24a}$

E. $\dfrac{17}{24a}$

13. Write $\dfrac{2}{20}$ as an equivalent fraction with denominator 4,180.

A. $\dfrac{418}{4,180}$

B. $\dfrac{423}{4,180}$

C. $\dfrac{428}{4,180}$

D. $\dfrac{417}{4,180}$

E. $\dfrac{420}{4,180}$

14. Find the missing term so that the two fractions are equal.

$$\frac{1}{3} = \frac{?}{294}$$

A. 98
B. 103
C. 97
D. 108
E. 95

15. Find the missing term so that the two fractions are equivalent.

$$\frac{2}{9} = \frac{14}{?}$$

A. 47
B. 51
C. 55
D. 59
E. 63

16. Find the missing term so that the two fractions are equivalent.

$$\frac{5}{4} = \frac{?}{12x}$$

A. x
B. $15x$
C. 21
D. $9x$
E. 15

17.   Simplify by dividing the numerator by the denominator.

$$\frac{18}{1}$$

A. 0
B. 1
C. 18

18.   Simplify by dividing the numerator by the denominator.

$$\frac{17}{17}$$

A. 0
B. 17
C. 1

19.   Name the denominator of the fraction.

6

A. 1
B. –2
C. 6
D. 7
E. –1

20.   Name the numerator of the fraction.

10

A. 9
B. 11
C. 1
D. 12
E. 10

21. Simplify by dividing the numerator by the denominator.

$$\frac{30}{5}$$

A. 6
B. 5
C. $\frac{6}{5}$

D. $\frac{5}{30}$

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

22. Simplify by dividing the numerator by the denominator.

$$\frac{24}{8}$$

A. 8
B. $\frac{1}{3}$

C. $\frac{3}{8}$

D. 3
E. $\frac{8}{24}$

23. Find the missing term so that the two fractions are equal.

$$\frac{6}{19} = \frac{?}{1,653}$$

522

24. Find the missing term so that the two fractions are equivalent.

$$\frac{7}{3} = \frac{35}{\underline{}}$$

15

25. Name the denominator of the fraction.

$$\frac{1}{6}$$

6

26. Simplify by dividing the numerator by the denominator.

$$\frac{14}{1}$$

14

27. Simplify by dividing the numerator by the denominator.

$$\frac{27}{27}$$

1

28. Name the denominator of the fraction.

14

1

29. Name the numerator of the fraction.

3

3

30. Simplify by dividing the numerator by the denominator.

$$\frac{12}{3}$$

4

31. Simplify by dividing the numerator by the denominator.

$$\frac{12}{6}$$

2

32. Determine whether the following fractions are proper or improper.

Choose the correct letter for each question.

1. improper $\frac{5}{13}$ **2**

2. proper $\frac{5}{3}$ **1**

33. **Number of Children**

If there are 2girls in a family with 5 children, then we say that $\frac{2}{5}$ of the children are girls. If there are

1girl in a family with 5 children, what fraction of the children are girls?

$$\frac{1}{5}$$

34.   **Number of Students**

In a class of 53 students, 21 are freshmen and 32 are juniors. What fraction of the students are freshmen?

$$\frac{21}{53}$$

35.   Write the equivalent fraction with denominator 24 for the fraction $\frac{3}{8}$.

$$\frac{9}{24}$$

36.   Divide the numerator and the denominator of the following fraction by 2, to obtain an equivalent fraction. Enter as an improper fraction where applicable.

$$\frac{2}{4}$$

$$\frac{1}{2}$$

37. Divide the numerator and the denominator of the following fraction by 3, to obtain an equivalent fraction. Enter as an improper fraction where applicable.

$$\frac{3}{48}$$

$$\frac{1}{16}$$

38. Write the following fraction as an equivalent fraction with denominator 6. Enter as an improper fraction where applicable.

$$\frac{5}{3}$$

$$\frac{10}{6}$$

39. Write the following fraction as an equivalent fraction with denominator 6. Enter as an improper fraction where applicable.

$$\frac{92}{24}$$

$$\frac{23}{6}$$

40. Write the following fraction as an equivalent fraction with denominator 12. Enter as an improper fraction where applicable.

$$\frac{1}{3}$$

$$\frac{4}{12}$$

41. Write the following fraction as an equivalent fraction with denominator $12x$.

$$\frac{5}{4}$$

$$15 \cdot \frac{x}{(12x)}$$

42. Write the following fraction as an equivalent fraction with denominator $24a$. Enter as an improper fraction where applicable.

$$\frac{11}{4}$$

$$66 \cdot \frac{a}{(24a)}$$

43. Write $\frac{1}{3}$ as an equivalent fraction with denominator 711. Enter as an improper fraction where applicable.

$$\frac{237}{711}$$

44. Choose the correct statement(s).

    a. $\frac{5}{9} = \frac{5+3}{9+3}$

    b. $\frac{5}{9} = \frac{5 \cdot 3}{9 \cdot 3}$

    Answer *a* or *b* or *both*.

    b

45. Choose the correct statement(s).

    a. $\frac{8}{9} = \frac{8+z}{9+z}$ for any value of z

    b. $\frac{8}{9} = \frac{8 \cdot z}{9 \cdot z}$ for any nonzero value of z

    Answer *a* or *b* or *both*.

    b

46.   Find the missing term so that the two fractions are equivalent.

$$\frac{3}{5} = \frac{}{35x}$$

$21x$