M104 FRACTIONS -1

1

6

If $x > 0$, which of the following is equivalent to $\frac{1}{x} + \frac{1}{2x}$?

A) $\frac{1}{x}$

B) $\frac{1}{2x}$

C) $\frac{3}{2x}$

D) $\frac{2}{3x}$

2

7

If $\frac{3}{5}w = \frac{4}{3}$, what is the value of w ?

A) $\frac{9}{20}$

B) $\frac{4}{5}$

C) $\frac{5}{4}$

D) $\frac{20}{9}$

3

6

If $\frac{a-b}{b} = \frac{3}{7}$, which of the following must also be true?

A) $\frac{a}{b} = -\frac{4}{7}$

B) $\frac{a}{b} = \frac{10}{7}$

C) $\frac{a+b}{b} = \frac{10}{7}$

D) $\frac{a-2b}{b} = -\frac{11}{7}$

4

5

If $\frac{5}{x} = \frac{15}{x+20}$, what is the value of $\frac{x}{5}$?

A) 10

B) 5

C) 2

D) $\frac{1}{2}$

5

7

If $\frac{8}{x} = 160$, what is the value of x ?

A) 1,280

B) 80

C) 20

D) 0.05

6

1

$$\frac{5(k+2)-7}{6} = \frac{13-(4-k)}{9}$$

In the equation above, what is the value of k?

A) $\frac{9}{17}$

B) $\frac{9}{13}$

C) $\frac{33}{17}$

D) $\frac{33}{13}$

7

1

$$\frac{3}{4} = \frac{x}{60}$$

In the equation above, what is the value of x ?

A) 25

B) 30

C) 40

D) 45

8

8

If $\frac{a}{b} = 2$, what is the value of $\frac{4b}{a}$?

A) 0

B) 1

C) 2

D) 4

9

10

$$\frac{5}{x-1} + \frac{8}{2(x-1)}$$

Which of the following expressions is equivalent to the one above, where $x \neq 1$?

A) $\frac{9}{x-1}$

B) $\frac{14}{x-1}$

C) $\frac{15}{2x-2}$

D) $\frac{21}{2x-2}$

10

10

If $\frac{t+5}{t-5} = 10$, what is the value of t ?

A) $\frac{45}{11}$

B) 5

C) $\frac{11}{2}$

D) $\frac{55}{9}$

11

12

If $\frac{2a}{b} = \frac{1}{2}$, what is the value of $\frac{b}{a}$?

A) $\frac{1}{8}$

B) $\frac{1}{4}$

C) 2

D) 4

12

17

If $\frac{7}{9}x - \frac{4}{9}x = \frac{1}{4} + \frac{5}{12}$, what is the value of x ?

13

17

$$\frac{2}{3}t = \frac{5}{2}$$

What value of t is the solution of the equation above?

14

18

$$\frac{1}{2}(2x + y) = \frac{21}{2}$$
$$y = 2x$$

The system of equations above has solution (x, y). What is the value of x ?

15

13

If $x > 3$, which of the following is equivalent to $\dfrac{1}{\frac{1}{x+2} + \frac{1}{x+3}}$?

A) $\dfrac{2x+5}{x^2+5x+6}$

B) $\dfrac{x^2+5x+6}{2x+5}$

C) $2x+5$

D) x^2+5x+6

16

19

$$\frac{2x+6}{(x+2)^2} - \frac{2}{x+2}$$

The expression above is equivalent to $\dfrac{a}{(x+2)^2}$, where a is a positive constant and $x \neq -2$.

What is the value of a ?

1 C
2 D
3 B
4 C
5 D
6 B
7 D
8 C

9 A
10 D
11 D
12 2
13 3.75 or 15/4
14 5.25 or 21/4
15 B
16 2