

Chapter 6 Exam v2

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Determine whether the fractions are equal.

- 1) $\frac{1}{7}$ and $\frac{19}{133}$ 1) _____
A) Yes B) No

Change the following fraction to a mixed number.

- 2) $\frac{37}{3}$ 2) _____
A) $12\frac{1}{3}$ B) $\frac{1}{3}$ C) $13\frac{1}{3}$ D) $11\frac{1}{7}$

Perform the indicated operation. Express your answer in simplest form.

- 3) $\frac{2}{29} + \frac{3}{29}$ 3) _____
A) $\frac{6}{29}$ B) $\frac{1}{29}$ C) $\frac{5}{29}$ D) $\frac{5}{58}$

- 4) $\frac{9}{13} + \frac{1}{7}$ 4) _____
A) $\frac{19}{5}$ B) $\frac{1}{2}$ C) $\frac{10}{91}$ D) $\frac{76}{91}$

Find the product. Write your answer in simplest form.

- 5) $2\frac{1}{4} \cdot \frac{5}{7}$ 5) _____
A) $\frac{20}{63}$ B) $1\frac{17}{28}$ C) $\frac{24}{25}$ D) $\frac{3}{28}$

Write the fraction in simplest form.

- 6) $\frac{6}{8}$ 6) _____
A) $\frac{4}{3}$ B) $\frac{7}{9}$ C) $\frac{3}{4}$ D) $\frac{7}{5}$

Solve for x in the following.

- 7) $-\frac{3}{2}x + \frac{1}{4} = \frac{x}{-4} + \frac{1}{8}$ 7) _____
A) $\frac{1}{14}$ B) $\frac{3}{20}$ C) -18 D) $\frac{1}{10}$

Perform the indicated operation. Express your answer in simplest form.

8) $\frac{5}{12} - \frac{1}{7}$ 8) _____
A) $\frac{23}{19}$ B) $\frac{4}{19}$ C) $\frac{1}{21}$ D) $\frac{23}{84}$

Choose the pair of rational numbers that are between the given fractions.

9) $\frac{2}{5}$ and $\frac{3}{5}$ 9) _____
A) $\frac{5}{10}, \frac{7}{10}$ B) $\frac{6}{15}, \frac{9}{15}$ C) $\frac{9}{20}, \frac{13}{20}$ D) $\frac{7}{15}, \frac{8}{15}$

Change the following mixed number to a fraction in the form $\frac{a}{b}$, where a and b are integers and $b \neq 0$.

10) $5\frac{4}{7}$ 10) _____
A) $\frac{39}{7}$ B) $\frac{39}{4}$ C) $\frac{35}{7}$ D) $\frac{35}{4}$

Solve for x in the proportion.

11) $\frac{5}{x} = \frac{15}{6}$ 11) _____
A) 2 B) 20 C) 5 D) $\frac{1}{2}$

Perform the indicated operation. Express your answer in simplest form.

12) $\frac{-2}{45} - \frac{3}{40}$ 12) _____
A) $\frac{-360}{43}$ B) $\frac{-43}{360}$ C) $\frac{-1}{1800}$ D) $\frac{43}{9}$

Solve for x in the following.

13) $\frac{5x}{8} = \frac{x}{8} + \frac{1}{2}$ 13) _____
A) 1 B) $-\frac{2}{3}$ C) $\frac{2}{3}$ D) -1

14) $\frac{4}{5}x = \frac{2}{3}$ 14) _____
A) $\frac{10}{3}$ B) $\frac{5}{6}$ C) $\frac{8}{15}$ D) $\frac{8}{3}$

If a and b are rational numbers, with $a \neq 0$ and $b \neq 0$, and if m and n are integers, determine if the following is true or false. Justify your answer.

15) $(a - b)^m = a^m - b^m$ 15) _____
A) True; $(2 - 1)^1 = 2^1 - 1^1$ B) False; $(2 - 1)^2 \neq 2^2 - 1^2$

Solve the problem.

- 16) The floor of a rectangular room is to be tiled with $\frac{1}{3}$ foot square tiles along a $6\frac{1}{4}$ foot wall. How many tiles will be needed along the wall? 16) _____
- A) $18\frac{3}{4}$ tiles B) 20 tiles C) $18\frac{1}{4}$ tiles D) $2\frac{1}{12}$ tiles

Perform the indicated operation. Express your answer in simplest form.

- 17) $\frac{7}{4x} - \frac{3}{4y}$ 17) _____
- A) $\frac{7x - 3y}{4xy}$ B) $\frac{7y - 3x}{4xy}$ C) $\frac{7x + 3y}{4xy}$ D) $\frac{4}{xy}$

Solve the problem. Express your answer in simplest form.

- 18) An attorney drove $1\frac{1}{2}$ miles from his home to a client's home and another $20\frac{2}{9}$ miles to get to his office. How far did he drive in total? 18) _____
- A) $20\frac{13}{18}$ mi B) $1\frac{13}{18}$ mi C) $21\frac{13}{18}$ mi D) $22\frac{13}{18}$ mi

Perform the indicated operation. Express your answer in simplest form.

- 19) $64\frac{1}{2} - 25\frac{1}{5}$ 19) _____
- A) $196\frac{1}{2}$ B) $\frac{3}{10}$ C) $\frac{10}{393}$ D) $39\frac{3}{10}$

Determine whether the fractions are equal.

- 20) $\frac{768}{-352}$ and $\frac{-1008}{462}$ 20) _____
- A) Yes B) No