

Chapter 6 Exam v1

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

Solve the problem. Express your answer in simplest form.

- 1) Peter must practice the piano $10\frac{1}{2}$ hours per week. He has already practiced $4\frac{3}{4}$ hours. How many more hours does he need to practice? 1) _____
- A) $5\frac{3}{4}$ hr B) $6\frac{3}{4}$ hr C) 5 hr D) $4\frac{3}{4}$ hr

Write the fraction in simplest form.

- 2) $\frac{6}{8}$ 2) _____
- A) $\frac{3}{4}$ B) $\frac{7}{5}$ C) $\frac{7}{9}$ D) $\frac{4}{3}$

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

- 3) $\frac{1}{6} + 1$ 3) _____
- A) $\frac{7}{12}$ B) $\frac{7}{6}$ C) $\frac{7}{2}$ D) $\frac{7}{36}$

Find the product. Write your answer in simplest form.

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


Solve for x in the proportion.

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

Determine whether the fractions are equal.

- 6) $\frac{192}{312}$ and $\frac{152}{247}$ 6) _____
- A) Yes B) No

Provide the proper response. Show all fractions in simplest form.

- 7) Write a fraction to represent the shaded portion of the figure. 7) _____
- 
- A) $\frac{5}{8}$ B) $\frac{3}{5}$ C) $\frac{5}{3}$ D) $\frac{3}{8}$

Write the fraction in simplest form.

8) $\frac{24}{174}$

8) _____

A) $\frac{173}{23}$

B) $\frac{1}{7}$

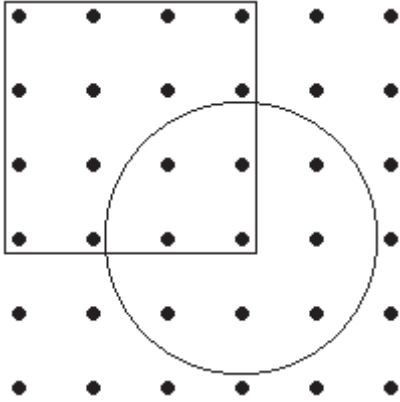
C) $\frac{4}{29}$

D) $\frac{29}{4}$

Provide the proper response. Show all fractions in simplest form.

9) Refer to the figure below and represent the indicated amount as a fraction.

9) _____



The dots inside the intersection of the rectangle and the circle as a part of all the dots.

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

B) $\frac{4}{21}$

C) $\frac{1}{9}$

D) $\frac{4}{9}$

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

10) $\frac{10}{12} + \frac{7}{54}$

10) _____

A) $\frac{104}{11}$

B) $\frac{17}{648}$

C) $\frac{17}{66}$

D) $\frac{26}{27}$

Answer the question. Give your answer in simplest form.

11) Jake correctly answered 16 out of 25 questions in Test 1 and 18 out of 25 questions on test 2. On Test 3 he missed 5 out of 27 questions. Which test had the best score?

11) _____

A) Test 2

B) Test 2 and Test 3

C) Test 1

D) Test 3

Solve the problem.

12) On a certain map, 1 inch equals 24 miles. How many miles are in $5\frac{1}{4}$ inches?

12) _____

A) 31 mi

B) $30\frac{1}{4}$ mi

C) 126 mi

D) $4\frac{4}{7}$ mi

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.

13) $(ab)^{-m} = \frac{1}{a^m} \cdot \frac{1}{b^m}$

13) _____

A) True; $(3 \cdot 1)^{-2} = \frac{1}{3^2} \cdot \frac{1}{1^2}$

B) False; $(2 \cdot 1)^{-2} \neq \frac{1}{2^2} \cdot \frac{1}{1^2}$

Determine whether the fractions are equal.

14) $\frac{1}{9}$ and $\frac{15}{135}$

14) _____

A) Yes

B) No

Write the following in simplest form using positive exponents.

15) $(-3)^{-2}$

15) _____

A) 3^2

B) $\frac{1}{3^2}$

C) -3^2

D) $-\frac{1}{3^2}$

Find the product. Write your answer in simplest form.

16) $\frac{9}{7} \cdot \frac{8}{3}$

16) _____

A) $\frac{24}{7}$

B) $\frac{1}{3}$

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

D) $\frac{56}{27}$

Solve for n in the following.

17) $6^n = 1296$

17) _____

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

B) 4

C) $\frac{1}{24}$

D) 24

Divide. Express your answer in simplest form.

18) $\frac{1}{4} \div \frac{-1}{9}$

18) _____

A) -1

B) $\frac{1}{17}$

C) $\frac{-9}{4}$

D) $\frac{-1}{36}$

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

19) $\frac{5}{12} - \frac{1}{7}$

19) _____

A) $\frac{23}{19}$

B) $\frac{1}{21}$

C) $\frac{4}{19}$

D) $\frac{23}{84}$

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Provide an appropriate response.

20) Find three sets of x- and y-values for the following:

20) _____

$$\frac{5 \text{ car washes}}{\$15} = \frac{x \text{ car washes}}{\$y}$$