Unit 7 Fractions & Probability Study Guide

Name Answer Key #____ Date_____

Write two equivalent fractions.

1. $\frac{1}{6} = \frac{2}{12} = \frac{3}{18}$

2. $\frac{3}{5} = \frac{6}{10} = \frac{9}{15}$

3. $\frac{6}{10} = \frac{12}{20} = \frac{60}{100}$

Compare. Write >, <, or =.

4. $\frac{1}{3} \_\_>\_\_ \frac{1}{5}$

5. $\frac{13}{14} \_\_>\_\_ \frac{3}{14}$

Compare. Write >, <, or =.

6. $\frac{3}{7} \_\_=\_\_ \frac{6}{14}$

7. $\frac{5}{16} \_\_<\_\_ \frac{3}{5}$

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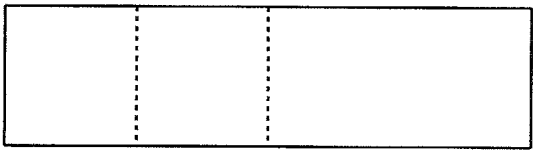
Write the set of fractions in order from smallest to largest.

8. $\frac{4}{10}, \frac{3}{10}, \frac{9}{10}, \frac{7}{10}, \frac{5}{10}$ $\frac{3}{10}, \frac{4}{10}, \frac{5}{10}, \frac{7}{10}, \frac{9}{10}$

9. $\frac{1}{3}, \frac{1}{14}, \frac{1}{2}, \frac{1}{7}, \frac{1}{8}$ $\frac{1}{14}, \frac{1}{8}, \frac{1}{7}, \frac{1}{3}, \frac{1}{2}$

10. If the pattern block trapezoid is the whole, what fraction of the whole is the pattern block triangle? $\frac{1}{3}$

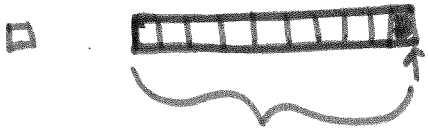
11. Look at the figure below.



a. What fraction of the given rectangle are 2 squares? 1 rectangle? $\frac{2}{4}$ or $\frac{1}{2}$ → $\frac{1}{2}$

b. What fraction of the rectangle do 2 squares and 1 rectangle cover? 1 whole

12. If the cube represents $\frac{1}{10}$, what represents the unit whole? 1 "long" or 1 ten stick



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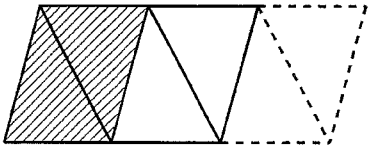
13. Two triangles are $\frac{1}{2}$ of the whole. Write the name of the pattern block that is

    a. 1 whole – parallelogram

    b. $1\frac{1}{2}$ whole – parallelogram



14. Sara had 8 quarters. She spent $\frac{1}{4}$ of them on video games.

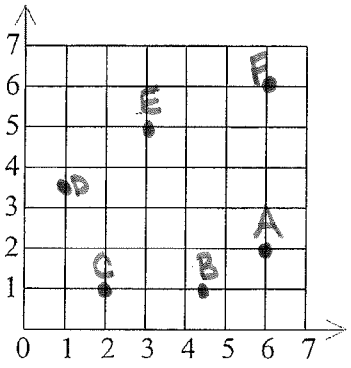
    a. How many quarters did she spend? $\frac{1}{4}$ of 8 = 2 quarters

    b. How many quarters does she have left? 8 - 2 = 6 quarters

    c. How much money does she have left? 6 quarters = $1.50

15. A bag contains 4 blue blocks, 5 purple blocks, 4 green blocks, and 5 yellow blocks. You put your hand in the bag and pull out a block. About what fraction of the time would you expect to get a yellow block? $\frac{5}{18}$

16. Plot and label each point on the coordinate grid.



A 6, 2

B $4\frac{1}{2}$, 1

C 2, 1

D 1, $3\frac{1}{2}$

E 3, 5

F 6, 6

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23. Add or subtract. Use pattern blocks.

a. $\frac{9}{9} = \frac{6}{9} + \frac{3}{9}$

b. $\frac{4}{4} = \frac{2}{4} + \frac{2}{4}$

c. $\frac{3}{4} - \frac{1}{4} = \frac{2}{4}$ or $\frac{1}{2}$

d. $\frac{6}{9} - \frac{1}{9} = \frac{5}{9}$

24. Solve using pattern blocks. Explain your strategy.

$\frac{1}{6} + \frac{1}{3}$

$\frac{1}{6}$ = (1 triangle) + $\frac{1}{3}$ = (1 rhombus) ($\frac{1}{3} = \frac{2}{6}$)

($\frac{1}{6}$)△ + ($\frac{1}{3}$)◇ = 1 triangle + 1 rhombus = 1 $\frac{1}{2}$ trapezoid

$\frac{1}{6} + \frac{2}{6} = \frac{3}{6}$ or $\frac{1}{2}$

25. It took Denise $\frac{1}{3}$ of an hour to drive from Zion to Platt and $\frac{2}{6}$ of an hour to drive from Platt to Rome. To figure out her total driving time, Denise wrote the following number model:

$\frac{1}{3} + \frac{2}{6} = \frac{3}{9}$.

Do you agree that it took her about $\frac{3}{9}$ of an hour? Explain your answer.

No, she added the unlike denominators. The denominators must be the same and are not added. You only add the numerators.

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17. Multiply. Use a paper-and-pencil algorithm of your choice.
$40 * 65 =$ 2,600

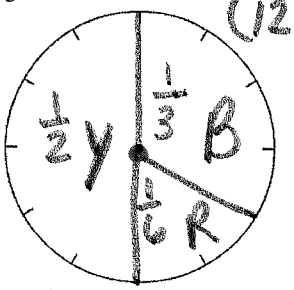
18. Multiply. Use a paper-and-pencil algorithm of your choice.
3,294 $= 54 * 61$

19. Divide. Use a paper-and-pencil algorithm of your choice.
$65 \div 2 =$ 32 R1 or $32\frac{1}{2}$

20. Divide. Use a paper-and-pencil algorithm of your choice.
$7\overline{)495}$ 70 R5 or $70\frac{5}{7}$

21. Which fraction is larger: $\frac{5}{16}$ or $\frac{3}{5}$? Explain how you know. $\frac{3}{5}$ is larger because it is larger than $\frac{1}{2}$ and $\frac{5}{16}$ is smaller than $\frac{1}{2}$.

22. a. Divide the spinner so that a paper clip will land on R about $\frac{1}{6}$ of the time and on B about $\frac{1}{3}$ of the time. The remaining part of the spinner represents Y.



(12 equal sections)

$\frac{1}{3} = \frac{4}{12}$ $\frac{1}{2} = \frac{6}{12}$

$\frac{1}{6} = \frac{2}{12}$

b. About what fraction of the time do you think the clip will land on Y? $\frac{1}{2}$