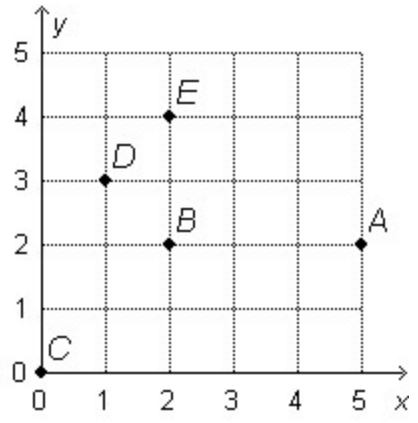
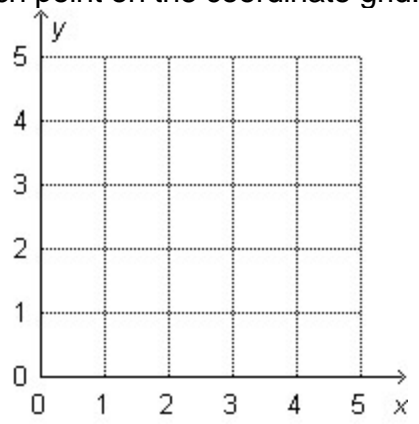


## Unit 07 PC Form A

1.  Use pencil and paper to answer the question.

Plot and label each point on the coordinate grid.

- A (5,2)
- B (2,2)
- C (0,0)
- D (1,3)
- E (2,4)



ANSWER:

2.  Use pencil and paper to answer the question.

Write two fractions equivalent to  $\frac{3}{4}$ .

\_\_\_\_\_

ANSWER: Sample answer:  $\frac{6}{8}, \frac{9}{12}$

3.  Use pencil and paper to answer the question.

For each fraction, write two equivalent fractions.

a.  $\frac{1}{4}$

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

c.  $\frac{4}{6}$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

ANSWER: Sample answers:

a.  $\frac{2}{8}, \frac{3}{12}$

b.  $\frac{2}{12}, \frac{3}{18}$

c.  $\frac{2}{3}, \frac{8}{12}$

## Unit 07 PC Form A

4.  Use pencil and paper to answer the question.

Write two fractions equivalent to  $\frac{2}{16}$ .

\_\_\_\_\_

ANSWER: Sample answer:  $\frac{1}{8}, \frac{3}{24}$

5. Write  $>$ ,  $<$ , or  $=$  to make a true number sentence.

$$\frac{1}{8} \text{ _____ } \frac{1}{11}$$

ANSWER:  $>$

6. Write  $>$ ,  $<$ , or  $=$  to make a true number sentence.

$$\frac{12}{16} \text{ _____ } \frac{5}{16}$$

ANSWER:  $>$

7. Write  $>$ ,  $<$ , or  $=$  to make a true number sentence.

$$\frac{3}{4} \text{ _____ } \frac{12}{16}$$

ANSWER:  $=$

8.  Use pencil and paper to answer the question.

Write  $>$ ,  $<$ , or  $=$  to make each number sentence true.

a.  $\frac{1}{4} \text{ _____ } \frac{1}{7}$

b.  $\frac{4}{10} \text{ _____ } \frac{6}{10}$

c.  $\frac{15}{18} \text{ _____ } \frac{5}{6}$

ANSWER:

a.  $>$

b.  $<$

c.  $=$

9.  Use pencil and paper to answer the question.

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

$$\frac{26}{100}, \frac{57}{100}, \frac{75}{100}, \frac{46}{100}, \frac{15}{100} \quad \underline{\hspace{1cm}} \quad \underline{\hspace{1cm}} \quad \underline{\hspace{1cm}} \quad \underline{\hspace{1cm}} \quad \underline{\hspace{1cm}}$$

smallest    largest

ANSWER:  $\frac{15}{100}, \frac{26}{100}, \frac{46}{100}, \frac{57}{100}, \frac{75}{100}$

## Unit 07 PC Form A

10.  **Use pencil and paper to answer the question.**

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

a.  $\frac{3}{8}, \frac{3}{100}, \frac{3}{10}, \frac{3}{4}, \frac{3}{5}$

\_\_\_\_\_ smallest \_\_\_\_\_ largest

b.  $\frac{3}{8}, \frac{1}{8}, \frac{6}{8}, \frac{7}{8}, \frac{5}{8}$

\_\_\_\_\_ smallest \_\_\_\_\_ largest

ANSWER: a.  $\frac{3}{100}, \frac{3}{10}, \frac{3}{8}, \frac{3}{5}, \frac{3}{4}$

b.  $\frac{1}{8}, \frac{3}{8}, \frac{5}{8}, \frac{6}{8}, \frac{7}{8}$

11. If the yellow hexagon is the whole, what fraction of the whole is 1 red trapezoid?

\_\_\_\_\_

ANSWER:  $\frac{1}{2}$

12.  **Use pencil and paper to answer the question.**

Use pattern blocks to help solve the following problems.

If the yellow hexagon is the whole, what fraction of the whole is

a. 1 blue rhombus? \_\_\_\_\_ b. 1 red trapezoid? \_\_\_\_\_

c. Suppose the blue rhombus is  $\frac{2}{3}$  of the whole.

Which pattern block is 1 whole? \_\_\_\_\_

d. Suppose the green triangle is  $\frac{1}{2}$  of the whole.

Which pattern block is 1 whole? \_\_\_\_\_

ANSWER:

a.  $\frac{1}{3}$

b.  $\frac{1}{2}$

c. red trapezoid

d. blue rhombus

13. Suppose the red trapezoid is  $\frac{1}{2}$  of the whole.

Which pattern block is 1 whole? \_\_\_\_\_

a. yellow hexagon    b. green triangle    c. blue rhombus

ANSWER: a

## Unit 07 PC Form A

14.  **Use pencil and paper to answer the question.**

Markus had 48 quarters. He spent  $\frac{1}{6}$  of them on used books.

- a. How many quarters did he spend? \_\_\_\_\_ quarters  
 b. How many quarters did he have left? \_\_\_\_\_ quarters  
 c. How much money does he have left? \$\_\_\_\_\_.

ANSWER: a. 8 quarters; b. 40 quarters; c. \$10.00

15. A bag contains  
 3 blue blocks  
 5 green blocks  
 4 yellow blocks, and  
 1 purple block.

You put your hand in the bag and pull out a block.

About what fraction of the time would you expect to get a purple block? \_\_\_\_\_

ANSWER: 1/13

16. Multiply. Use a paper-and-pencil algorithm.

$49 * 31 =$  \_\_\_\_\_

ANSWER: 1,519  
 1519

17.  **Use pencil and paper to answer the question.**

Multiply. Use paper-and-pencil algorithms of your choice.

- a. \_\_\_\_\_ =  $86 * 42$                       b.  $47 * 32 =$  \_\_\_\_\_


ANSWER:  
 a. 3,612    b. 1,504

## Unit 07 PC Form A

18. Divide. Use a paper-and-pencil algorithm.

$$7 \overline{)162} = \underline{\hspace{2cm}}$$

- a. 23 R1    b. 23 R6    c. 23    d. 24

ANSWER: a

19. Divide. Use a paper-and-pencil algorithm.

$$512 \div 7 = \underline{\hspace{2cm}}$$

- a. 73 R1    b. 73 R4    c. 73    d. 74

ANSWER: a

20.  Use pencil and paper to answer the question.

Divide. Use paper-and-pencil algorithms of your choice.

a.  $163 \div 6 = \underline{\hspace{2cm}}$

b.  $9 \overline{)784} = \underline{\hspace{2cm}}$


ANSWER: a. 27 R1 or  $27\frac{1}{6}$

b. 87 R1 or  $87\frac{1}{9}$

## Unit 07 PC Form A

21.  Use pencil and paper to answer the question.

Which fraction is larger:  $\frac{4}{5}$  or  $\frac{6}{7}$ ? \_\_\_\_\_

Explain how you know.

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ANSWER:  $\frac{6}{7}$ ; Sample answer:  $\frac{6}{7}$  is only  $\frac{1}{7}$  away from 1, and  $\frac{4}{5}$  is  $\frac{1}{5}$  away from 1.

$\frac{1}{7}$  is a smaller fraction than  $\frac{1}{5}$ , so  $\frac{6}{7}$  is closer to 1 than  $\frac{4}{5}$  is.

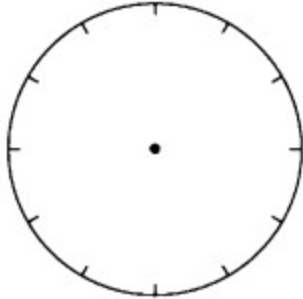
Also,  $\frac{4}{5}$  is 0.8 and  $\frac{6}{7}$  is about 0.86. 0.86 is greater than 0.8, so  $\frac{6}{7}$  is greater than  $\frac{4}{5}$ .

## Unit 07 PC Form A

22.  Use pencil and paper to answer the question.

Make a spinner.

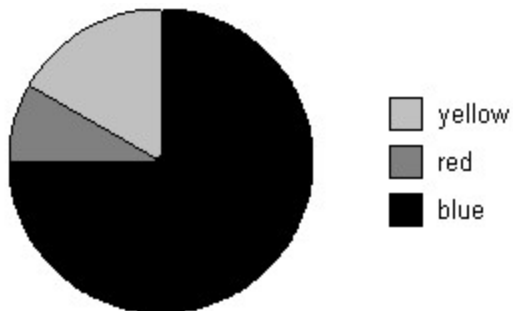
a. Color it so that a paper clip will land on yellow about  $\frac{1}{6}$  of the time and on red about  $\frac{1}{12}$  of the time. Color the rest blue.



b. About what fraction of the time should you expect the paper clip to land on blue?

\_\_\_\_\_

ANSWER: a.



b. I would expect the paper clip to land on blue about  $\frac{3}{4}$  of the time.

23. Add. Use pattern blocks to help you.

$$\frac{2}{6} + \frac{1}{6} = \underline{\hspace{2cm}}$$

- a.  $\frac{1}{2}$     b.  $\frac{3}{12}$     c.  $\frac{3}{7}$     d.  $\frac{3}{13}$

ANSWER: a

## Unit 07 PC Form A

24. Add. Use pattern blocks to help you.

$$\frac{1}{2} + \frac{1}{6} = \underline{\hspace{2cm}}$$

- a.  $\frac{2}{3}$    b.  $\frac{2}{8}$    c.  $\frac{8}{8}1$    d.  $\frac{2}{12}$

ANSWER: a

25. Subtract. Use pattern blocks to help you.

$$\frac{4}{6} - \frac{3}{6} = \underline{\hspace{2cm}}$$

ANSWER:  $\frac{1}{6}$  or an equivalent fraction

26.  Use pencil and paper to answer the question.

Add or subtract. Use pattern blocks to help you.

a.  $\frac{1}{6} + \frac{1}{6} = \underline{\hspace{2cm}}$

b.  $\frac{1}{6} + \frac{1}{3} = \underline{\hspace{2cm}}$

c.  $\frac{5}{6} - \frac{4}{6} = \underline{\hspace{2cm}}$

d.  $\frac{1}{3} - \frac{1}{6} = \underline{\hspace{2cm}}$

ANSWER:

a.  $\frac{1}{3}$

b.  $\frac{1}{2}$

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

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

27. Subtract. Use pattern blocks to help you.

$$\frac{1}{2} - \frac{1}{6} = \underline{\hspace{2cm}}$$

- a.  $\frac{1}{3}$    b. 0   c. 1   d.  $\frac{5}{12}$

ANSWER: a



## Unit 07 PC Form A

28.  Use pencil and paper to answer the question.

Maria practiced her piano lesson for  $\frac{2}{3}$  of an hour on Monday and  $\frac{5}{6}$  of an hour on Tuesday. To figure out her total practice time, Maria wrote the following number model:  $\frac{2}{3} + \frac{5}{6} = \frac{7}{9}$ .

Do you agree that Maria practiced  $\frac{7}{9}$  of an hour? \_\_\_\_\_ Explain.

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*ANSWER:* No; Sample answer: She added the denominators, which is not correct. She should have written a model with equivalent fractions with like denominators:  $\frac{4}{6} + \frac{5}{6} = 1\frac{1}{2}$ . She should have noticed that her answer should be greater than 1 hour since both fractions are greater than or equal to  $\frac{1}{2}$ .

## Unit 07 PC Form A

29.  Use pencil and paper to answer the question.

### Queen Barbara's Dilemma

a. Queen Barbara has a problem. She wants to divide her land among her

4 daughters. She wants her oldest to get  $\frac{1}{3}$  of the land and her younger daughters to each get  $\frac{1}{4}$  of the land.

Can she do it? Explain your answer.

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b. After thinking about it, Queen Barbara decides to keep  $\frac{1}{2}$  of her land and have her 4 children divide the other  $\frac{1}{2}$ . She still wants the oldest daughter to get more land than her sisters.

Think of a way to use fractions to divide the land.

Explain your answer.

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*ANSWER:* a. No she cannot do it. If she gives her oldest daughter  $\frac{1}{3}$  of the land, there is only  $\frac{2}{3}$  left. If each of her younger daughters got  $\frac{1}{4}$ , that would be  $\frac{3}{4}$ . Since  $\frac{3}{4}$  is greater than  $\frac{2}{3}$ , there is not enough land left.

b. If she gave her oldest daughter  $\frac{1}{2}$  of what she wants to give away, that's  $\frac{1}{4}$  of her land. That leaves  $\frac{1}{4}$  for her other 3 daughters. If she gives her other 3 daughters all the same amount, they would each get  $\frac{1}{12}$  of her land.