

ORANGE PUBLIC SCHOOLS  
OFFICE OF CURRICULUM AND INSTRUCTION  
OFFICE OF MATHEMATICS

# GRADE 5 MATHEMATICS Pre - Assessment



School Year 2013-2014

## **Directions for Grade 5 Pre-Assessment**

The Grade 5 Pre-Assessment is made up of 20 multiple choice questions and 5 short constructed response and 2 extended constructed response questions.

Read each question carefully, including diagrams and graphs. Work as rapidly as you can without sacrificing accuracy. Do not spend too much time puzzling over a question that seems too difficult for you. Answer the easier questions first; then return to the harder ones. Try to answer every question, even if you have to guess.

Where necessary, you may use scratch paper for your work. Do not use the margins of the test booklet to do scratch work.

**YOU MUST RECORD ALL OF YOUR ANSWERS IN THE ANSWER BOOKLET.** Do not write in this test booklet.

If you change an answer, be sure to erase your first choice completely. Incomplete erasures may be read as intended answers.

**ALL ANSWERS MUST BE RECORDED IN YOUR ANSWER BOOKLET.**

You may **not** use a calculator in any part of the test.

## Grade 5 Pre Assessment

Multiple Choice Questions 1 – 20

Choose the best answer for each question and mark your choice in the ANSWER BOOKLET provided.

1. Subtract:

$$4\frac{1}{2} - 1\frac{3}{8}$$

A.  $3\frac{1}{12}$

C.  $1\frac{1}{8}$

B.  $6\frac{1}{4}$

D.  $3\frac{1}{8}$

2. Solve the following.

$$4 \div \frac{1}{9}$$

A. 32

C. 13

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

D. 36

3. Which of the following equations is modeled by the figure below?



A.  $5 \times \frac{2}{3} = \frac{10}{15}$

C.  $5 \times \frac{3}{2} = \frac{15}{10}$

B.  $5 \times \frac{2}{3} = \frac{10}{3}$

D.  $5 \times \frac{3}{2} = \frac{3}{10}$

4. Which of the following fractions makes the number sentence true?

$$\frac{1}{3} \times \text{_____} > \frac{1}{3}$$

A.  $\frac{3}{2}$

C.  $\frac{2}{3}$

B.  $\frac{3}{3}$

D. 1

5. The product of  $\frac{1}{2}$  and  $\frac{1}{4}$  is shown on the grid below.



A.  $\frac{5}{8}$

C.  $\frac{1}{5}$

B.  $\frac{1}{8}$

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

6. Solve the following:

$$\frac{1}{5} \div 8 = ?$$

A.  $\frac{8}{13}$

C.  $\frac{8}{5}$

B.  $\frac{5}{8}$

D.  $\frac{1}{40}$

7. Simplify the following expression.

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

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

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

B.  $\frac{2}{9}$

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

8. Subtract:

$$\frac{3}{4} - \frac{3}{16} = ?$$

A.  $\frac{1}{12}$

C.  $\frac{2}{3}$

B.  $\frac{9}{16}$

D.  $\frac{3}{8}$

9. Add:

$$1\frac{1}{2} + 3\frac{1}{8}$$

A.  $4\frac{3}{8}$

C.  $4\frac{2}{10}$

B.  $4\frac{5}{8}$

D.  $4\frac{1}{6}$

10. Subtract:

$$4\frac{2}{3} - 1\frac{1}{2} = ?$$

A.  $4\frac{3}{4}$

C.  $3\frac{1}{8}$

B.  $1\frac{5}{6}$

D.  $3\frac{1}{6}$

11. Multiply:  $\frac{4}{7} \times \frac{3}{4} = ?$

A.  $\frac{16}{21}$

C.  $1\frac{1}{11}$

B.  $\frac{3}{7}$

D.  $\frac{7}{11}$

12. Caterers made 266 cups of punch for a party. They will distribute the punch equally into 6 bowls. How many cups of punch will each bowl have?

A.  $44\frac{1}{3}$

C. 44

B.  $44\frac{1}{6}$

D. 45

13. Solve

$$12 \times \frac{6}{13}$$

A.  $\frac{74}{13}$

C.  $\frac{72}{13}$

B.  $\frac{71}{13}$

D.  $\frac{70}{13}$

14. Subtract:

$$\frac{1}{2} - \frac{1}{4} = ?$$

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

C.  $\frac{1}{8}$

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

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

15. Jessica made 2 pounds of fudge. How many  $\frac{1}{6}$  pound servings are in the 2 pounds of fudge?

A. 12

C. 20

B. 16

D. 8

16. Which expression is equivalent to  $\frac{7}{13}$ ?

A.  $7 \div \frac{1}{13}$

C.  $13 \div \frac{1}{7}$

B.  $7 \div 13$

D.  $13 \div 7$

17. Stephen budgets  $\frac{1}{3}$  of his money to spend on movies and music. Last month, he spent  $\frac{8}{9}$  of the budgeted amount. How much of his total budget did he spend on movies and music last month?

A.  $\frac{8}{27}$

C.  $3\frac{3}{8}$

B.  $\frac{3}{8}$

D.  $4\frac{1}{8}$

18. Which of the following is **not** equivalent to the expression below?

$$\frac{1}{2} \times 8$$

A.  $\frac{1 \times 8}{2}$

C.  $1 \times \frac{8}{2}$

B.  $\frac{1}{2 \times 8}$

D.  $1 \times 8 \div 2$

19. Solve:

$$\frac{1}{16} + \frac{1}{2} = ?$$

A.  $\frac{9}{16}$

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

B.  $\frac{9}{32}$

D.  $\frac{1}{8}$



20. Scott ran in a two-day race. The first day he ran  $5\frac{3}{4}$  miles. The next day he ran  $6\frac{5}{8}$  miles. How many total miles did Scott run?

A.  $11\frac{3}{8}$

B.  $11\frac{2}{3}$

C.  $12\frac{3}{8}$

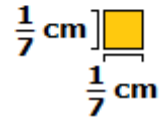
D.  $12\frac{3}{4}$

# **Constructed Response Section**

21. What is the area of the figure below?



Key:

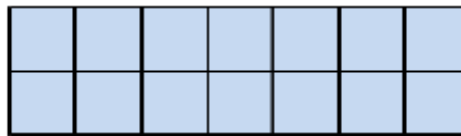


22. Houston ran  $\frac{11}{13}$  of a mile on Monday and ran  $\frac{9}{13}$  of a mile on Tuesday. How much farther did he run on Monday than he did on Tuesday?

23. A recipe for sugar cookies calls for  $\frac{1}{2}$  of a cup of sugar and  $\frac{1}{4}$  of a cup of flour. Altogether, how much sugar and flour does the recipe need?

24. Kurt is taking a road trip and has  $\frac{1}{6}$  of his total distance left to travel. He plans to travel the remaining distance in 4 hours. What fraction of the trip will Kurt travel each hour?

25. A rectangle is divided into 14 congruent square tiles. Each tile has a side length of a  $\frac{1}{4}$  inch



What is the area in square inches of the rectangle?



**27. Cindy's Cats**

Cindy has 3 cats: Sammy, Tommy and Suzi.



a. Cindy feeds them on Cat Crunchies.

Each day Sammy eats  $\frac{1}{2}$  of the box, Tommy eats  $\frac{1}{8}$  of the box and Suzi eats  $\frac{1}{4}$  of the box.

What fraction of a whole box do the cats eat, in all, each day? \_\_\_\_\_  
Show how you figured this out.

b. Tommy and Suzi spend much of each day sleeping. Tommy sleeps for  $\frac{3}{5}$  of the day and Suzi sleeps for  $\frac{7}{10}$  of the day.

Which of the two cats sleeps for longer? \_\_\_\_\_

How much longer does it sleep each day? \_\_\_\_\_

Show how you figured this out.

c. Cindy's cats often share a carton of cat milk.

Sammy always drinks  $\frac{1}{3}$  of the carton, Tommy always drinks  $\frac{5}{12}$  of the carton, and Suzi always drinks  $\frac{1}{6}$  of the carton.

What fraction of the carton of cat milk is left over? \_\_\_\_\_

Show how you figured this out.

d. Cindy's cats love to jump in and out of their cat door. Yesterday the cat door was used 100 times by her cats. Sammy used it for  $\frac{1}{4}$  of the times and Tommy used it for  $\frac{3}{10}$  of the times.

How many times did Suzi use the cat door? \_\_\_\_\_

Explain how you figured it out.

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