

**QCA Review**  
**6<sup>th</sup> Grade PreAP**

1. Write the numbers  $-2.1$ ,  $-1\frac{5}{6}$ ,  $-1\frac{2}{3}$ , and  $-2.2$  in the form  $\frac{a}{b}$ , from greatest to least.

$-2\frac{1}{10}$     $-1\frac{1}{6}$  ,    $-1\frac{2}{3}$     $-2\frac{2}{10}$   
 $-\frac{21}{10}$     $-\frac{11}{6}$     $-\frac{5}{3}$     $-\frac{22}{10}$   
           3           2           1           4

2. Mandy divided a 12-pound bag of oranges into 5 equal piles. Which rational number represents the weight of the oranges in each pile?

$\frac{12}{5}$

3. Kevin compared the absolute values of  $-2\frac{1}{8}$ ,  $-2.25$ ,  $2\frac{3}{8}$ ,  $-2.29$ , and  $2\frac{4}{11}$ . Which number has the greatest absolute value?

$0.3636$   
 $11 \overline{) 4000}$   
 $\underline{330}$   
 $700$   
 $\underline{660}$   
 $400$   
 $\underline{330}$   
 $700$

$2.125$   
 $2.250$   
 $2.375$   
 $2.363$

$0.125$   
 $2 \overline{) 1000}$   
 $\underline{800}$   
 $200$   
 $\underline{160}$   
 $40$

4. Elena spent \$2.50 on pineapple juice. Pineapple juice costs \$0.10 per ounce. How many ounces of pineapple juice did Elena buy?

$0.25$   
 $0.10 \overline{) 2.50}$   
 $\underline{20}$   
 $50$

5. Five chemistry students observed the following mixture temperatures.

Student	Mixture Temperature
Alex	-5 5
Casey	3 2
Gabriella	-4 4
Ernie	5 1
Morgan	-1 3

Write the temperatures in order from greatest to least?

6. David drives 40 miles in one hour. How many miles does he drive in 1.5 hours?

$$\begin{array}{r} 40 \\ \times 1.5 \\ \hline 200 \\ 400 \\ \hline 60.0 \end{array}$$

7. Dori claims that 3.52 is not a rational number because it is not written as a ratio of integers. Is she correct? Explain why or why not.

$3 \frac{52}{100} = \frac{352}{100} \rightarrow$  can be written in  $\frac{a}{b}$  form so it is a rational #

8. How many 0.5-liter glasses of water can be poured from a full 6-liter pitcher?

$$\begin{array}{r} 12 \\ 5 \overline{)60} \\ \underline{50} \\ 10 \end{array}$$

$$\begin{array}{r} 4 \\ 46 \\ \underline{36} \\ 10 \end{array}$$

$$7\frac{1}{2} \times 6\frac{1}{4} = 46\frac{3}{8}$$

9. Juanita is measuring a table for her dining room. The area of the table is  $46\frac{7}{8}$  square feet. The length of the table is  $7\frac{1}{2}$  feet. Juanita does not want to purchase a table that is greater than 6 feet wide. Should she purchase the table? Explain why or why not.

$$46\frac{7}{8} \div 7\frac{1}{2}$$

$$25 \frac{375}{8} \times \frac{2}{15} = \frac{75}{8} = 9\frac{3}{8} = 6\frac{1}{4}$$

No because  $6\frac{1}{4}$  is larger than 6.

$$\begin{array}{r} 0.75 \\ 5 \overline{)3.75} \\ \underline{35} \\ 25 \\ \underline{25} \\ 0 \end{array}$$

10. Finn divided a 5-pound bag of flour into 3 equally-sized containers. What fraction of pound of flour did he put into each container?

$$\begin{array}{r} 1.66 \\ 3 \overline{)5.00} \\ \underline{3} \phantom{0} \\ 20 \\ \underline{18} \\ 20 \end{array}$$

1.66 or  $1\frac{2}{3}$

11. Talia measured a piece of construction paper to be 6.1 inches wide by 8.2 inches long. What is the area of the piece of construction paper in square inches?

$$\begin{array}{r} 6.1 \\ \times 8.2 \\ \hline 122 \\ 488 \\ \hline 50.02 \end{array}$$

12. The area of a rug is  $36\frac{1}{4}$  square feet. The rug is  $8\frac{3}{4}$  feet long. What is the length of the rug?

$$36\frac{1}{4} \div 8\frac{3}{4} \rightarrow \frac{145}{4} \div \frac{35}{4} = \frac{145}{35} = \frac{29}{7} = 4\frac{1}{7}$$

$\frac{145}{4} \div \frac{35}{4}$   
 $\frac{29}{7}$   
 $4\frac{1}{7}$

13. A caterer prepared a turkey that weighed  $27\frac{1}{2}$  pounds. Each serving of turkey will be  $\frac{1}{3}$  pound. How many whole servings will the turkey provide?

$$27\frac{1}{2} \div \frac{1}{3} = \frac{55}{2} \times \frac{3}{1} = \frac{165}{2} = 82\frac{1}{2}$$

$82\frac{1}{2}$  or 82 whole servings

14. Tomas bought a bottle of shampoo that held  $10\frac{1}{2}$  fluid ounces. He uses  $\frac{1}{16}$  of the shampoo every time he washes his hair. How many ounces of the shampoo are left after he washes his hair 6 times?

$$10\frac{1}{2} \times \frac{6}{1} = 63$$

$$10\frac{1}{2} \times 4 = 42$$

$$42 - 3 = 39$$

$10\frac{1}{2}$

15. Dwayne earns ~~\$11.45~~ <sup>\$11.40</sup> per hour. Last week he worked  $36\frac{3}{4}$  hours. How much did he earn last week?

$$36.75 \times 11.40 = 418.95$$

16. A straw for a box drink is  $4\frac{1}{8}$  inches long and costs \$0.015 to make. The straws are laid end-to-end on the conveyor belt until they extend  $123\frac{3}{4}$  inches. How many straws are in the line?

$$123\frac{3}{4} \div 4\frac{1}{8} = \frac{495}{4} \div \frac{33}{8} = \frac{495}{4} \times \frac{8}{33} = \frac{165}{11} = 15$$

$\frac{495}{4} \div \frac{33}{8}$   
 $\frac{165}{11} = 15$

17. Mary and her 3 friends grabbed handfuls of candy out of a pumpkin bucket on Halloween. Mary grabbed  $\frac{3}{4}$  of a pound of candy, Sally grabbed  $\frac{3}{5}$  of a pound, Fran grabbed  $\frac{7}{12}$  of a pound and Rachel grabbed  $\frac{2}{3}$  of a pound of candy. If the bucket held 4 pounds before the girls took their candy, how much is left?

$$\begin{array}{l} M \quad \frac{3}{4} \times \frac{15}{15} = \frac{45}{60} \\ S \quad \frac{3}{5} \times \frac{12}{12} = \frac{36}{60} \\ F \quad \frac{7}{12} \times \frac{5}{5} = \frac{35}{60} \\ R \quad \frac{2}{3} \times \frac{20}{20} = \frac{40}{60} \end{array}$$

$$\frac{156}{60} = 2 \frac{36}{60} \div 12 = 2 \frac{3}{5}$$

$$4 = 3 \frac{5}{5}$$

$$- 2 \frac{3}{5}$$


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$$1 \frac{2}{5}$$

$$\begin{array}{r} 45 \\ 36 \\ \hline 81 \\ 35 \\ \hline 116 \\ 40 \\ \hline 156 \end{array}$$

18. Ellie earned \$18.40 by babysitting. She worked 2.3 hours. How much money was Ellie paid per hour?

$$\begin{array}{r} 1008.0 \\ 23 \overline{) 1840} \\ \underline{184} \phantom{0} \\ 00 \phantom{0} \end{array}$$

$$8.00$$

19. Mrs. Cranmore's baby weighs  $19\frac{1}{3}$  pounds. Last month he gained  $\frac{2}{5}$  of a pound. Then he got the flu and lost  $\frac{1}{4}$  of a pound. How much does he weigh now?

$$19\frac{1}{3} \times \frac{5}{5} = 19\frac{5}{15}$$

$$+ \frac{2}{5} \times \frac{3}{3} = \frac{6}{15}$$

$$19\frac{11}{15} \times \frac{4}{4} = 19\frac{44}{60}$$

$$- \frac{1}{4} \times \frac{15}{15} = \frac{15}{60}$$

$$19\frac{29}{60}$$

20. David completed  $\frac{3}{8}$  of his homework at school and  $\frac{1}{2}$  of his homework after school at home. If his homework has 25 questions and is due tomorrow, how many questions does he still need to complete?

$$\frac{25}{1} \div \frac{1}{8} = 200$$

$$200 \times \frac{3}{8} = 75$$

$$200 \times \frac{1}{2} = 100$$

$$\frac{25}{1} \cdot \frac{7}{8} = \frac{175}{8}$$

$$25 - 75 = -50$$

$$-50 + 100 = 50$$

$$50 \div 8 = 6\frac{2}{8} = 6\frac{1}{4}$$

21. Martha put  $\frac{3}{4}$  cup of paint into a container. She used  $\frac{1}{3}$  cup of the paint on a craft project. Later she added another  $\frac{1}{2}$  cup of paint to the container. How much paint is in the container now?

$$\frac{3}{4} \times \frac{3}{3} = \frac{9}{12}$$

$$- \frac{1}{3} \times \frac{4}{4} = \frac{4}{12}$$

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


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$$\frac{11}{12}$$

22. A swimming pool is 28.3 feet long and 18.6 feet wide. A section of the pool 10.1 feet by 4.7 feet is roped off for children only. What area of the pool is available for adults?

$$\begin{array}{r} 10.1 \leftarrow 1 \\ \times 4.7 \leftarrow 1 \\ \hline 707 \\ 404 \times \\ \hline 47.47 \leftarrow 2 \end{array}$$

$$\begin{array}{r} 28.3 \leftarrow 2 \\ \times 18.6 \leftarrow 2 \\ \hline 1698 \\ 2264 \times \\ 283 \times \times \\ \hline 526.38 \end{array}$$

$$\begin{array}{r} 4 \overset{1}{5} \overset{1}{5} \\ 506.38 \\ \times 47.47 \\ \hline 47891 \end{array}$$

23. Nathan wanted to buy three pounds of assorted nuts. He bought  $\frac{1}{2}$  pound of cashews,  $\frac{3}{4}$  pounds of walnuts, and  $\frac{3}{8}$  pounds of pecans. The rest of the mixture was peanuts. How many pounds of peanuts did he buy?

$$\frac{1}{2} \times \frac{4}{4} = \frac{4}{8}$$

$$\frac{3}{4} \times \frac{2}{2} = \frac{6}{8}$$

$$\frac{3}{8} \rightarrow \frac{3}{8}$$

$$\frac{13}{8} = 1 \frac{5}{8}$$

$$\begin{array}{r} 3 = 2 \frac{6}{8} \\ - 1 \frac{5}{8} \\ \hline 1 \frac{1}{8} \end{array}$$

24. Mindy has 5 yards of ribbon. If she uses  $2\frac{5}{6}$  yards of ribbon for a curtain trim and  $1\frac{1}{8}$  yards of ribbon for a pillow trim, how much ribbon would she have left?

$$2\frac{5}{6} \times \frac{4}{4} = 2\frac{20}{24}$$

$$\begin{array}{r} + 1\frac{1}{8} \times \frac{3}{3} = 1\frac{3}{24} \\ \hline 3\frac{23}{24} \end{array}$$

$$\begin{array}{r} 5 = 4\frac{24}{24} \\ - 3\frac{23}{24} \\ \hline 1\frac{1}{24} \end{array}$$

25. A trampoline has a jumping surface that is 10.3 feet long and 9.2 feet wide. What is the area of the jumping surface?

$$\begin{array}{r} 10.3 \leftarrow 1 \\ \times 9.2 \leftarrow 1 \\ \hline 206 \\ 927 \times \\ \hline 94.76 \leftarrow 2 \end{array}$$