Chapter 7 Review/Test

Concepts and Skills

1. When you multiply $3\frac{1}{4}$ by a number greater than one, how does the product compare to $3\frac{1}{4}$? Explain. (CC.5.NF.5a, CC.5.NF.5b)

   The product will be greater than $3\frac{1}{4}$ since I am finding more than 1 or $3\frac{1}{4}$.

Use a model to solve. (CC.5.NF.4a)

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

3. $\frac{3}{7} \times \frac{2}{1} = \frac{6}{7}$
   
   $\frac{6}{7}$

4. $\frac{5}{9} \times \frac{3}{1} = \frac{15}{9}$
   
   $\frac{15}{9}$

Find the product. Write the product in simplest form. (CC.5.NF.4a)

5. $\frac{3}{5} \times \frac{8}{1} = \frac{24}{5}$
   
   $\frac{4\frac{4}{5}}{5}$
   
   $\frac{4\frac{4}{5}}{5}$

6. $\frac{1}{2} \times \frac{5}{1} = \frac{5}{2}$
   
   $\frac{2\frac{1}{2}}{2}$

7. $\frac{5}{7} \times \frac{15}{1} = \frac{75}{7}$
   
   $\frac{10\frac{5}{7}}{7}$

8. $\frac{5}{6} \times \frac{1}{3} = \frac{5}{9}$
   
   $\frac{5}{9}$

9. $\frac{1}{2} \times \frac{3}{7} = \frac{1}{7}$
   
   $\frac{1}{7}$

10. $\frac{3}{8} \times \frac{1}{6} = \frac{1}{16}$
    
    $\frac{1}{16}$

Complete the statement with equal to, greater than, or less than. (CC.5.NF.5a, CC.5.NF.5b)

11. $\frac{7}{8} \times \frac{6}{6}$ will be equal to $\frac{7}{8}$

12. $\frac{1}{2} \times \frac{8}{9}$ will be less than $\frac{8}{9}$
13. Wolfgang wants to enlarge a picture he developed. Which factor listed below would scale up (enlarge) his picture the most if he used it to multiply its current dimensions? (CC.5.NF.5a)

A  $\frac{7}{8}$  
B  $\frac{14}{14}$  
C  $\frac{14}{9}$  
D  $\frac{3}{2} = 1\frac{1}{2}$  

\[
\begin{array}{c}
\frac{4}{9} \cdot \frac{2}{2} = \frac{8}{18} \\
\frac{9}{18} \\
\end{array}
\]

\[\boxed{\frac{8}{18}\bigcirc\bigtimes\frac{9}{18}}\]

14. Rachel wants to reduce the size of her photo. Which factor listed below would scale down (reduce) the size of her picture the most? (CC.5.NF.5a)

A  $\frac{5}{8}$  
B  $\frac{11}{16}$  
C  $\frac{3}{4}$  
D  $\frac{8}{5} \times$

\[
\begin{array}{c}
\frac{5}{8} > \frac{11}{16} > \frac{3}{4} > \\
\frac{10}{16} < \frac{11}{16} < \frac{12}{16} \\
\text{that's the smallest!}
\end{array}
\]

15. Marteen wants to paint $\frac{2}{3}$ of her room today. She wants to paint $\frac{1}{4}$ of that before lunch. How much of her room will she paint today before lunch? (CC.5.NF.4a)

A  $\frac{1}{12}$  
B  $\frac{1}{6}$  
C  $\frac{5}{12}$  
D  $\frac{11}{12}$

\[
\frac{1}{4} \times \frac{2}{3} = \boxed{\frac{1}{6}}
\]

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Fill in the bubble completely to show your answer.

16. Gia's bus route to school is \(5\frac{1}{2}\) miles. The bus route home is \(1\frac{3}{4}\) times as long. How long is Gia's bus route home? (CC.SS.NF.6)

A \(5\frac{3}{10}\) miles
B 8 miles
C \(8\frac{4}{5}\) miles
D 17\(\frac{3}{5}\) miles

\[
5\frac{1}{2} \times 1\frac{3}{4} = \frac{11}{2} \div \frac{7}{4} = \frac{11 \times 4}{2 \times 7} = \frac{44}{14} = \frac{44 \div 2}{14 \div 2} = \frac{22}{7} \approx 3.142857
\]

17. Carl's dog weighs \(2\frac{1}{3}\) times what Judy's dog weighs. If Judy's dog weighs \(35\frac{1}{2}\) pounds, how much does Carl's dog weigh? (CC.SS.NF.6)

A \(88\frac{3}{4}\) pounds
B \(82\frac{8}{9}\) pounds
C \(81\frac{2}{3}\) pounds
D 71 pounds

\[
2\frac{1}{3} \times 35\frac{1}{2} = \frac{7}{3} \times \frac{71}{2} = \frac{497}{6} = \frac{497 \div 6}{6} \approx 82\frac{5}{6}
\]

18. In a fifth grade class, \(\frac{4}{5}\) of the girls have brown hair. Of the brown-haired girls, \(\frac{3}{4}\) of the girls have long hair. What fraction of the girls in the class have long brown hair? (CC.SS.NF.4a)

A \(\frac{1}{20}\)
B \(\frac{1}{5}\)
C \(\frac{3}{5}\)
D \(\frac{1}{4}\)

\[
\frac{4}{5} \times \frac{3}{4} = \frac{3}{5}
\]
19. Tasha plans to tile the floor in her room with square tiles that are \( \frac{1}{4} \) foot long. Will she use more or fewer tiles if she is only able to purchase square tiles that are \( \frac{1}{3} \) foot long? Explain. (CC.5.NF.4b)

She would use fewer tiles if she uses \( \frac{1}{3} \) ft long tiles. \( \frac{1}{4} \times \frac{1}{4} = \frac{1}{16} \text{ ft}^2 \), \( \frac{1}{3} \times \frac{1}{3} = \frac{1}{9} \text{ ft}^2 \).

Since \( \frac{1}{9} \text{ ft}^2 \) is larger than \( \frac{1}{16} \text{ ft}^2 \), she'd use less tiles.

20. For a bake sale, Violet wants to use the recipe at the right.

A If she wants to double the recipe, how much flour will she need?

5 1/2 cups flour

B Baxter wants to make 1 1/2 times the recipe. Will he need more or less sugar than Violet needs if she doubles the recipe? Explain.

Baxter would use less sugar because when you multiply something by 2, the product will be greater than when you multiply something by 1 1/2.

C As shown, the recipe makes 60 cookies. Jorge wants to bring 150 cookies. How much flour will he need to make 150 cookies? Explain how you got your answer.

(Hint: what can you multiply 60 by to get 150?)

6 1/2 cups of flour. I knew \( 60 \times 2 = 120 \) and \( 60 \times 3 = 180 \)... so I tried \( 60 \times 2 1/2 \) and got 150.

Then I multiplied \( 2 1/2 \times 2 1/2 \) to get 6 1/8.