

Key

Unit 3 Review (On-Level)

Multiply or divide. Write your answers in SIMPLEST FORM.

1. $\frac{2}{5} \times 15 =$

$\frac{2}{5} \times \frac{15}{1} = \frac{30}{5} = \frac{6}{1} = \boxed{6}$

2. $\frac{3}{4} \times \frac{8}{9} =$

$\frac{3}{4} \times \frac{8}{9} = \frac{24}{36} = \frac{2}{3}$

3. $\frac{7}{12} \div \frac{5}{6} =$

$\frac{7}{12} \div \frac{5}{6} = \frac{7}{12} \times \frac{6}{5} = \frac{42}{60} = \frac{7}{10}$

4. $6 \div \frac{9}{20} =$

$6 \div \frac{9}{20} = 6 \times \frac{20}{9} = \frac{120}{9}$

5. $5\frac{1}{4} \times 2\frac{1}{3} =$

$\frac{21}{4} \times \frac{7}{3} = \frac{147}{12}$

$12 \overline{) 147} = 12\frac{3}{4}$

6. $2\frac{3}{8} \times 16 =$

$\frac{19}{8} \times \frac{16}{1} = \frac{304}{8}$

$9 \overline{) 120} = 13\frac{1}{3}$

7. $3\frac{3}{5} \times 2\frac{2}{9} =$

$\frac{18}{5} \times \frac{20}{9} = \frac{360}{45}$

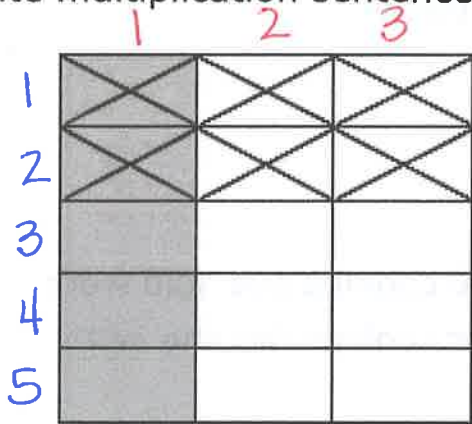
$45 \overline{) 360} = 8$

8. $3\frac{1}{5} \div 1\frac{7}{9} =$

$\frac{16}{5} \div \frac{16}{9} = \frac{16}{5} \times \frac{9}{16} = \frac{144}{80}$

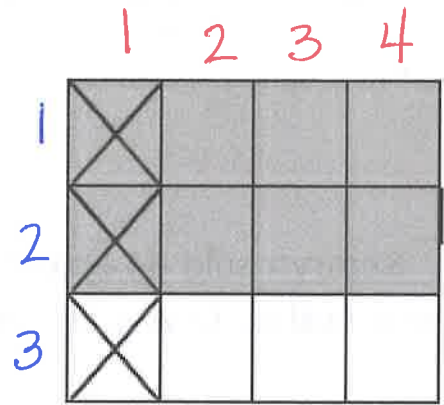
$80 \overline{) 144} = 1\frac{4}{5}$

Write multiplication sentences for the models below and then solve them.



9.

$\frac{2}{5} \times \frac{1}{3} = \frac{2}{15}$



10.

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

$\frac{164}{80} \div \frac{16}{16} = 1\frac{4}{5}$

Write the following improper fractions as mixed numbers or mixed numbers as improper fractions.

11. $\frac{28}{5}$

$5 \overline{)28}$
 $\underline{25}$
 3

$5\frac{3}{5}$

12. $5\frac{2}{7} \times \frac{5}{7}$

$\frac{35}{7} + \frac{2}{7}$

$\frac{37}{7}$

13. $\frac{18}{4}$

$4 \overline{)18}$
 $\underline{16}$
 2

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

14. $7\frac{5}{8}$

$\frac{56}{8} + \frac{5}{8}$

$\frac{61}{8}$

15. Write a multiplication expression that is equivalent to the division expression $\frac{3}{4} \div \frac{4}{5}$.

K C F

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

16. Mr. Morchat has a $\frac{1}{3}$ acre of land. He planted green beans on $\frac{3}{5}$ of this plot. On how much land did Mr. Morchat plant green beans?

$\frac{3}{5}$ of $\frac{1}{3} \Rightarrow \frac{3}{5} \times \frac{1}{3} = \frac{3 \div 3}{5 \div 3} = \frac{1}{5}$ acre

17. Brandon has $7\frac{1}{2}$ gallons of paint. He plans on using $1\frac{1}{2}$ gallons to paint each room. How many rooms will he be able to paint?

$7\frac{1}{2} \div 1\frac{1}{2} = \frac{15}{2} \div \frac{3}{2} = \frac{15}{2} \times \frac{2}{3} = \frac{30 \div 6}{6 \div 6} = \frac{5}{1} = 5$ rooms

18. Kamryn sold 64 boxes of cookies. If $\frac{5}{8}$ of the cookies she sold were peanut butter, how many boxes of peanut butter cookies did she sell?

$\frac{5}{8}$ of 64

$\frac{5}{8} \times \frac{64}{1} = \frac{320}{8}$

$8 \overline{)320}$
 $\underline{320}$
 00
 $\underline{00}$
 0

40 boxes

19. Emma is cutting strips of paper to make bookmarks. Each bookmark needs to be $\frac{1}{6}$ of a foot wide. She has 8 feet of paper. How many bookmarks will she be able to make?

$$\begin{array}{l} 8 \div \frac{1}{6} \\ \text{K} \quad \text{C} \quad \text{F} \\ \frac{8}{1} \div \frac{1}{6} = \frac{8}{1} \times \frac{6}{1} = \frac{48}{1} = 48 \text{ bookmarks} \end{array}$$

20. Seth helped his sister prepare for her piano concert. He worked with her 4 times on weekdays, spending $1\frac{1}{4}$ hours each time. Then over the weekend he helped her for 2 more hours. How many hours did Seth spend working with his sister?

$$4 \times 1\frac{1}{4} = \frac{4}{1} \times \frac{5}{4} = \frac{20}{4} = \frac{5}{1} = 5 + 2 = 7 \text{ hours}$$

21. Maddie had 42 tickets for games at a fall fest. She used $\frac{1}{7}$ of the tickets to do the cupcake walk. She then used $\frac{1}{2}$ of the tickets she had left to play in the bounce house. How many tickets did Maddie have after playing these two games?

$$\begin{array}{l} \frac{1}{7} \text{ of } 42 \Rightarrow \frac{1}{7} \times \frac{42}{1} = \frac{42 \div 7}{7 \div 7} = \frac{6}{1} = 6 \text{ tickets used} \Rightarrow 42 - 6 = 36 \text{ tickets left} \\ \frac{1}{2} \text{ of } 36 \Rightarrow \frac{1}{2} \times \frac{36}{1} = \frac{36 \div 2}{2 \div 2} = \frac{18}{1} = 18 \text{ tickets used} \Rightarrow 36 - 18 = 18 \text{ tickets left} \end{array}$$

22. Ms. Mann buys $8\frac{1}{4}$ pounds of cat food. She will put an equal amount of food into 11 storage containers. How much cat food will be in each container?

$$8\frac{1}{4} \div 11 = \frac{33}{4} \div \frac{11}{1} = \frac{33}{4} \times \frac{1}{11} = \frac{33 \div 11}{44 \div 11} = \frac{3}{4} \text{ pound}$$