

REVIEW: Multiplying Mixed Numbers

Name _____

Key Concept and Vocabulary

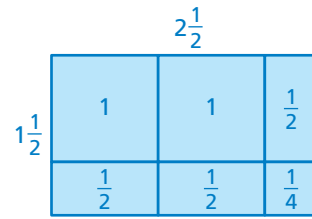
$$2\frac{1}{2} \times 1\frac{1}{2} = \frac{5}{2} \times \frac{3}{2} = \frac{15}{4}$$

Rewrite as improper fractions.

Multiply.



Visual Model



$$\text{Area} = 2\frac{1}{2} \times 1\frac{1}{2} = \frac{15}{4} = 3\frac{3}{4}$$

Skill Examples

1. $3\frac{1}{2} \times 2\frac{1}{3} = \frac{7}{2} \times \frac{7}{3} = \frac{49}{6} = 8\frac{1}{6}$

2. $1\frac{3}{4} \cdot 4\frac{1}{2} = \frac{7}{4} \cdot \frac{9}{2} = \frac{63}{8} = 7\frac{7}{8}$

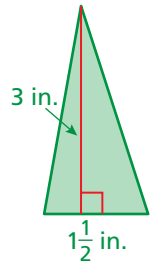
3. $2\frac{2}{5} \times 1\frac{2}{3} = \frac{12}{5} \times \frac{5}{3} = \frac{60}{15} = 4$

4. $\left(1\frac{1}{2}\right)\left(1\frac{1}{2}\right) = \left(\frac{3}{2}\right)\left(\frac{3}{2}\right) = \frac{9}{4} = 2\frac{1}{4}$

Application Example

5. Find the area of the triangle.

$$\begin{aligned} \text{Area} &= \frac{1}{2} \cdot 1\frac{1}{2} \cdot 3 \\ &= \frac{1}{2} \cdot \frac{3}{2} \cdot \frac{3}{1} = \frac{9}{4} = 2\frac{1}{4} \end{aligned}$$



∴ The area is $2\frac{1}{4}$ square inches.

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Check your answers at BigIdeasMath.com.

Find the product. Write your answer as a whole number or mixed number in simplified form.

6. $2\frac{1}{3} \times 1\frac{1}{3} = \frac{3\frac{1}{9}}$

7. $4\frac{2}{3} \times 1\frac{1}{2} = 7$

8. $1\frac{1}{2} \times 3 = 4\frac{1}{2}$

9. $5\frac{1}{6} \times \frac{1}{3} = 1\frac{13}{18}$

10. $\frac{3}{4} \cdot 3\frac{1}{2} = \frac{2\frac{5}{8}}$

11. $5 \cdot 4\frac{1}{2} = 22\frac{1}{2}$

12. $2\frac{1}{7} \cdot \frac{7}{15} = 1$

13. $1\frac{3}{5} \cdot \frac{3}{8} = \frac{3}{5}$

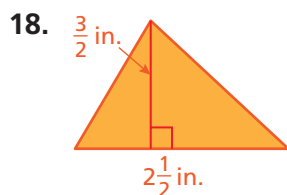
14. $\left(1\frac{1}{3}\right)^2 = \frac{1\frac{7}{9}}$

15. $\left(1\frac{1}{4}\right)^3 = \frac{1\frac{61}{64}}$

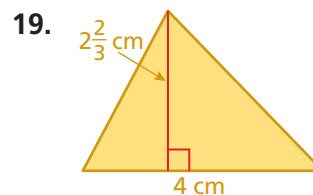
16. $\left(2\frac{1}{2}\right)\left(3\frac{1}{3}\right) = 8\frac{1}{3}$

17. $\left(3\frac{1}{2}\right)\left(\frac{1}{2}\right)^2 = \frac{7}{8}$

Find the area of the triangle.



Area = $1\frac{7}{8} \text{ in.}^2$



Area = $5\frac{1}{3} \text{ cm}^2$

20. **RECIPE** Rewrite the recipe so that each item is one-third of the full recipe.

$\frac{1}{2}$ cups flour
2 tsp baking powder
4 Tbsp butter
 $\frac{1}{2}$ tsp salt
 $\frac{3}{4}$ cup milk

$\frac{5}{6}$ cups flour

$\frac{1}{6}$ tsp salt

$\frac{2}{3}$ tsp baking powder

$\frac{1}{4}$ cup milk

$1\frac{1}{3}$ Tbsp butter