

Name: _____

Due Date: _____

Teacher: _____

Parent Sign: _____

2. A square is divided into 5 equal vertical strips. Shade $\frac{4}{5}$ of it. Then divide the square into 2 equal horizontal strips and shade $\frac{1}{2}$ of it. What fraction is shaded in both directions?
3. Using an area model (grid), show $\frac{2}{3} \times \frac{3}{5}$. What fraction of the whole grid is shaded?
4. Draw a 6-by-5 grid. Shade $\frac{5}{6}$ across and $\frac{2}{5}$ down. What fraction of the whole grid is doubly shaded?
5. A circle is partitioned into 4 equal parts. Shade $\frac{3}{4}$. Then partition again into 3 equal radial parts and shade $\frac{1}{3}$. What fraction is in both shaded areas?
6. Use an area model to find $\frac{7}{8} \times \frac{2}{7}$. Explain why part of the grid equals the product and give the product as a fraction.
7. A rectangle is partitioned into 3 equal rows and 4 equal columns. If you shade $\frac{2}{3}$ of the rows and $\frac{3}{4}$ of the columns, what fraction is shaded in both?
8. A bar model shows $\frac{5}{6}$ shaded. If you take $\frac{3}{5}$ of the shaded part, what fraction of the whole bar do you have?
9. Create an area model for $\frac{1}{2} \times \frac{4}{9}$. How many of the small squares are shaded? What fraction is that?
10. An area model shows $\frac{3}{4} \times \frac{2}{3}$. Draw or describe the overlap and give the fraction overlapped.

B. Multiplying 2 fractions – Number line

11. On a number line from 0 to 1, mark $\frac{1}{3}$. Then find $\frac{1}{2}$ of that point (i.e., $\frac{1}{2} \times \frac{1}{3}$). What point is it?
12. Use a number line to find $\frac{2}{5} \times \frac{3}{4}$. Show the steps and give the product.
13. On a number line, divide the segment from 0 to 1 into eighths. What is $\frac{3}{8} \times \frac{1}{2}$ as a point on the line?
14. Find $\frac{4}{7} \times \frac{1}{3}$ using a number line method. Which fraction does the product equal?
15. You have a number line 0 to 1. First go to $\frac{2}{3}$, then take $\frac{3}{5}$ of that distance. What point do you land on? (Compute $\frac{3}{5} \times \frac{2}{3}$.)
16. Using a number line, show $\frac{5}{6} \times \frac{1}{3}$ and give the simplified answer.
17. On a number line from 0 to 1, what is $\frac{2}{3} \times \frac{4}{5}$? Mark both fractions and the final point.
18. Use a number line to explain why $\frac{1}{4} \times \frac{2}{3} = \frac{2}{12}$. Simplify the result.
19. A student starts at 0, walks to $\frac{3}{4}$, then walks $\frac{2}{3}$ of that. Where are they? (Find $\frac{2}{3} \times \frac{3}{4}$.)
20. Use the number line to compute $\frac{7}{10} \times \frac{2}{5}$ and give a simplified fraction.

C. Multiplying 2 fractions – mixed numeracy (compute and simplify)

21. Compute and simplify: $\frac{2}{3} \times \frac{3}{8}$.
22. Compute and simplify: $\frac{6}{7} \times \frac{2}{9}$.
23. Compute and simplify: $\frac{9}{10} \times \frac{5}{9}$.
24. Multiply and simplify: $\frac{4}{5} \times \frac{3}{7}$.
25. Multiply and simplify: $\frac{8}{9} \times \frac{3}{4}$.
26. Multiply and simplify: $\frac{3}{2} \times \frac{2}{5}$. (Note: result may be improper.)
27. Find and simplify: $\frac{7}{12} \times \frac{6}{7}$.
28. Compute: $\frac{11}{12} \times \frac{2}{3}$ and simplify.

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29. Multiply: $\frac{5}{8} \times \frac{4}{5}$ and simplify.

30. Compute: $\frac{3}{4} \times \frac{5}{6}$ and simplify.

D. Multiplying 2 fractions – Word problems (varied)

31. Hannah baked a brownie and cut it into 12 equal pieces. She ate $\frac{1}{3}$ of the brownies, and of what was left, she gave $\frac{1}{4}$ to a friend. What fraction of the whole brownie did she give to her friend? (Compute $\frac{1}{4} \times \frac{2}{3}$ or set up accordingly.)

32. A ribbon is $\frac{2}{3}$ yard long. You use $\frac{3}{4}$ of it to wrap a gift. How many yards of ribbon did you use?

33. Sam read $\frac{5}{6}$ of a book. He then read $\frac{2}{5}$ of the remaining part. What fraction of the whole book did he read in that second reading? (Compute $\frac{2}{5} \times \frac{1}{6}$.)

34. A recipe needs $\frac{3}{4}$ cup of sugar. You make $\frac{2}{3}$ of the recipe. How much sugar do you use?

35. A garden plot uses $\frac{5}{8}$ of its area for vegetables. If $\frac{2}{3}$ of that vegetable area is planted with tomatoes, what fraction of the whole plot is tomatoes?

36. Emma had a juice box. She drank $\frac{2}{5}$ of it, then drank $\frac{1}{2}$ of what was left. What fraction of the whole box did she drink in the second action?

37. A map scale shows $\frac{3}{7}$ of an inch represents a mile. If you use $\frac{4}{5}$ of that scale measurement for a route, what fraction of an inch is used?

38. A building's crew paints $\frac{4}{5}$ of a wall. Of the painted part, $\frac{3}{4}$ is painted blue. What fraction of the whole wall is blue?

39. A cake recipe calls for $\frac{2}{3}$ cup of oil. You make half the recipe. How much oil do you use?

40. A farmer harvested $\frac{7}{8}$ of his field. He sold $\frac{3}{7}$ of the harvested amount. What fraction of the full field did he sell?

E. Multiplying 2 fractions – Focus on $\frac{5}{6} \times \frac{2}{3}$ (varied problem types)

41. Compute $\frac{5}{6} \times \frac{2}{3}$. Simplify your answer.

42. Draw an area model to show $\frac{5}{6} \times \frac{2}{3}$. What fraction does the overlap represent?

43. On a number line from 0 to 1, mark $\frac{5}{6}$. Then take $\frac{2}{3}$ of that distance. Where do you land? Give the fraction.

44. A pizza is cut into 6 equal slices. You eat $\frac{5}{6}$ of the pizza. If a friend eats $\frac{2}{3}$ of what you ate, what fraction of the whole pizza did your friend eat?

45. A candy bar is $\frac{5}{6}$ full after sharing. You give away $\frac{2}{3}$ of what remains full. What fraction of the whole bar was given away?

46. A classroom used $\frac{5}{6}$ of a roll of paper. Of the used paper, $\frac{2}{3}$ was decorated with stickers. What fraction of the full roll has stickers?

47. If you shade $\frac{5}{6}$ of a rectangle and then shade $\frac{2}{3}$ of it the other way (using perpendicular strips), what fraction is in the overlap? (Area model – same as compute $\frac{5}{6} \times \frac{2}{3}$.)

48. Write $\frac{5}{6} \times \frac{2}{3}$ as a product of whole numbers and simplify (show numerators x numerators and denominators x denominators).

49. If a rope is $\frac{5}{6}$ meter long and you cut off $\frac{2}{3}$ of that length, how many meters do you cut off?

50. A swimming pool is $\frac{5}{6}$ full. A leak drains $\frac{2}{3}$ of the water that is in the pool. What fraction of the pool's full capacity is lost?