

Name _____

Area of a Rectangle

You have learned how to multiply fractions by finding the area of a rectangle.

What is the area of a horse pasture that is $\frac{3}{8}$ mile long by $\frac{2}{3}$ mile wide?

You can draw the pasture on a 24×24 grid.

$$\frac{3}{8} = \frac{9}{24} \quad \text{Change each length and width to 24ths.}$$

$$\frac{2}{3} = \frac{16}{24}$$

Area = length \times width

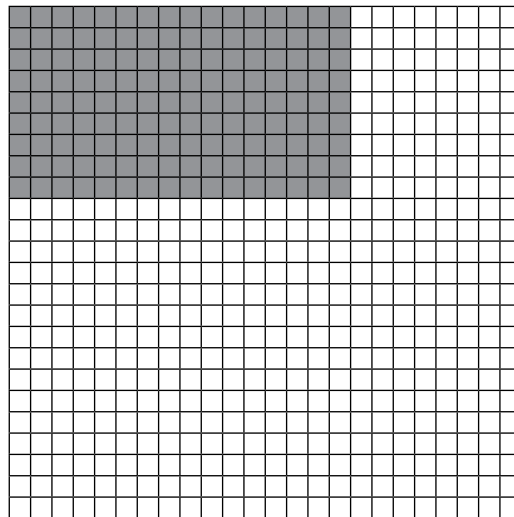
$$\frac{2}{3} \times \frac{3}{8} =$$

$$\frac{16}{24} \times \frac{9}{24} = \frac{144}{576}$$

$$\frac{144}{576} = \frac{1}{4}$$

So, the pasture has an area of $\frac{1}{4}$ square mile.

$$\frac{2}{3} = \frac{16}{24}$$



$$\frac{3}{8} = \frac{9}{24}$$

For questions 1-2, find each area.

1. a rectangle with sides of lengths $\frac{1}{6}$ yard and $\frac{3}{4}$ yard _____
2. a square with sides of lengths $\frac{2}{5}$ inch _____
3. **Writing to Explain** Is $\frac{5}{8}$ sq. in. a reasonable answer for the area of a rectangle with lengths of $\frac{1}{8}$ inch by 5 inches?

Name _____

Area of a Rectangle

Find each area.

1. a rectangle with sides of lengths $\frac{4}{5}$ foot and $\frac{1}{2}$ foot _____
2. a rectangle with sides of lengths $\frac{1}{3}$ yard and $\frac{3}{4}$ yard _____
3. a rectangle with sides of lengths $\frac{2}{3}$ foot and $\frac{1}{3}$ foot _____
4. a rectangle with sides of lengths $\frac{5}{6}$ inch and $\frac{1}{3}$ inch _____
5. a square with sides of length $\frac{5}{8}$ inch _____
6. a rectangle with a length of 3 inches and a width of $\frac{1}{8}$ inch _____
7. a rectangle with a length of $\frac{1}{5}$ yard and a width of $\frac{2}{3}$ yard _____
8. a rectangle with a length of $\frac{4}{9}$ foot and a width of 2 feet _____
9. Mrs. Henley built a cage for her bird. She wanted to cover the bottom of the cage with newspaper. If the cage is $\frac{1}{4}$ yard by $\frac{1}{2}$ yard, what is the area that needs to be covered?
A $\frac{1}{8}$ sq. yd **B** $\frac{1}{4}$ sq. yd **C** $\frac{1}{2}$ sq. yd **D** 8 sq. yd

10. **Writing to Explain** Tariq and Marie each multiplied $\frac{1}{8}$ inch \times $\frac{5}{8}$ inch. Tariq got $\frac{5}{8}$ sq. in. and Marie got $\frac{5}{64}$ sq. in. Which student found the correct area? How do you know?
- _____
- _____
- _____