

To be able to multiply fractions by integers

**MathShed**

**Starter:**  
If the two bar models below represent the 2<sup>nd</sup> and 3<sup>rd</sup> steps in a sequence, what would come before? What would come after?

Explain your answer.

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**Activity 1:**  
Use the representations below to help you calculate the following...

$\frac{2}{3} \times 4 =$

$3 \times \frac{7}{8} =$

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

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**Activity 2:**  
Yasmin uses partitioning to help her calculate  $2\frac{3}{4} \times 3 =$

Use her strategy to calculate:

$3\frac{7}{8} \times 3 =$        $2\frac{5}{7} \times 8 =$        $4 \times 2\frac{2}{6} =$

$2 \times 3 = 6$   
 $\frac{3}{4} \times 3 = \frac{9}{4} = 2\frac{1}{4}$   
 $6 + 2\frac{1}{4} = 8\frac{1}{4}$

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**Activity 3:**  
Use Ruth's strategy to calculate the following:  
Ex.  $3\frac{2}{5} \times 3 = \frac{17}{5} \times 3 = \frac{51}{5} = 10\frac{1}{5}$

a)  $3 \times 3\frac{3}{5} =$

b)  $2\frac{3}{7} \times 4 =$

c)  $3\frac{1}{6} \times 3 =$

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**Activity 4:**  
Jamal and Yasmin are both preparing for a dance competition.  
Jamal says, "I have spent  $3\frac{3}{4}$  hours over the past five weeks preparing."  
Yasmin says, "I have spent  $5\frac{1}{4}$  hours over the past four weeks rehearsing."  
  
Who has spent the most amount of time getting prepared for the competition?

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**Activity 5:**  
There are 9 wind turbines along a coast line.  
  
Each wind turbine is  $5\frac{7}{8}$  m apart from the next turbine.  
  
What is the total distance between the first and last wind turbine?

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Evaluation:



If you multiply a mixed number by a whole number, the resulting mixed number will have a greater value.

Is Astrobee's statement always, sometimes or never true?

Provide examples to explain your answer.