

# Equivalent Fractions

Grade 4 – Mathematics



## Lesson Details

<b>Grade Level:</b>	4	<b>Curriculum Links:</b>	Mathematics	<b>Time Needed:</b>	30 minutes
<b>Learning Goal</b>	To gain practice and confidence with fractions, while learning information about turtle conservation.				
<b>Success Criteria</b>	By the end of this lesson, students will have successfully completed the worksheet and learned information about turtle conservation.				
<b>Specific Expectations</b>	<p><i>Number Sense and Numeration: Quantity Relationships</i></p> <ul style="list-style-type: none"> <li>Represent fractions using concrete materials, words, and standard fractional notation;</li> <li>Compare and order fractions by considering the size and the number of fractional parts.</li> </ul>				
<b>Materials Needed</b>	Worksheet (attached), Pencil.				

## Lesson Description

<b>Overview</b>	Students will determine equivalent fractions while completing a fun activity.
<b>Activity</b>	<ol style="list-style-type: none"> <li>Hand out the worksheet to the students.</li> <li>Students will complete the worksheet individually.</li> <li>Optional: As a class, take up the worksheet.</li> </ol>
<b>Background Information</b>	<p>The Common Snapping Turtle is the largest freshwater turtle in Ontario. In the spring, female snapping turtles venture out of the water to find suitable locations to nest. This often occurs on sandy banks, or within the gravel on roadsides. This is a very vulnerable time for laying snappers, as they are exposed cars which can harm them. After the nests are laid, predators smell the freshly laid eggs and might dig into the nest eating some or all of the eggs.</p> <p>To help protect turtle nests from predation, nests can be protected with a cage. If nests cannot be caged (on a road, driveway, etc.) you can call the Turtle Guardians hotline (found on the Turtle Guardians website <a href="https://www.turtleguardians.com/contact/">https://www.turtleguardians.com/contact/</a>). In certain areas of Ontario, Trained Conservation Technicians may come to the turtle nest and collect the eggs to be incubated. Turtle eggs will incubate for at least 60 – 90 days before they hatch – and if in the care of a technician, they will return the baby turtle to where they were originally found.</p>
<b>Blacklist Masters</b>	<ul style="list-style-type: none"> <li>Worksheet (attached)</li> <li>For more information, please visit <a href="https://www.turtleguardians.com/">https://www.turtleguardians.com/</a></li> </ul>
<b>Place-Based Learning</b>	Students can relate what they have learned about turtles to their local wildlife.
<b>Inquiry-Based Learning</b>	<p>Using <b>Structured Inquiry</b>, students will complete the worksheet.</p> <p>Ask the students:</p> <ul style="list-style-type: none"> <li>Why is turtle conservation important?</li> <li>How can we help to protect a turtle nest?</li> </ul>
<b>Turtle Stories</b>	Try your hand at making new math problems for others to solve. Students are encouraged to share what they have learned and any new problems created on the

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	Turtle Stories website, found here: <a href="https://www.turtlestories.ca/">https://www.turtlestories.ca/</a>
<b>Turtle Guardian Program Links</b>	After completing <b>Level 1</b> (Ontario Turtle Identification) of the <b>Turtle Guardian Program</b> , students can move onto <b>Level 2</b> (Wetland Watchers). In this level the students learn the importance of protecting, and specifically of how to protect turtle nests. They then can become official nest sitters (when accompanied by an adult) and learn how to build a nest cage protector. For more information, please visit <a href="https://www.turtleguardians.com/what-is-a-turtle-guardian/">https://www.turtleguardians.com/what-is-a-turtle-guardian/</a>

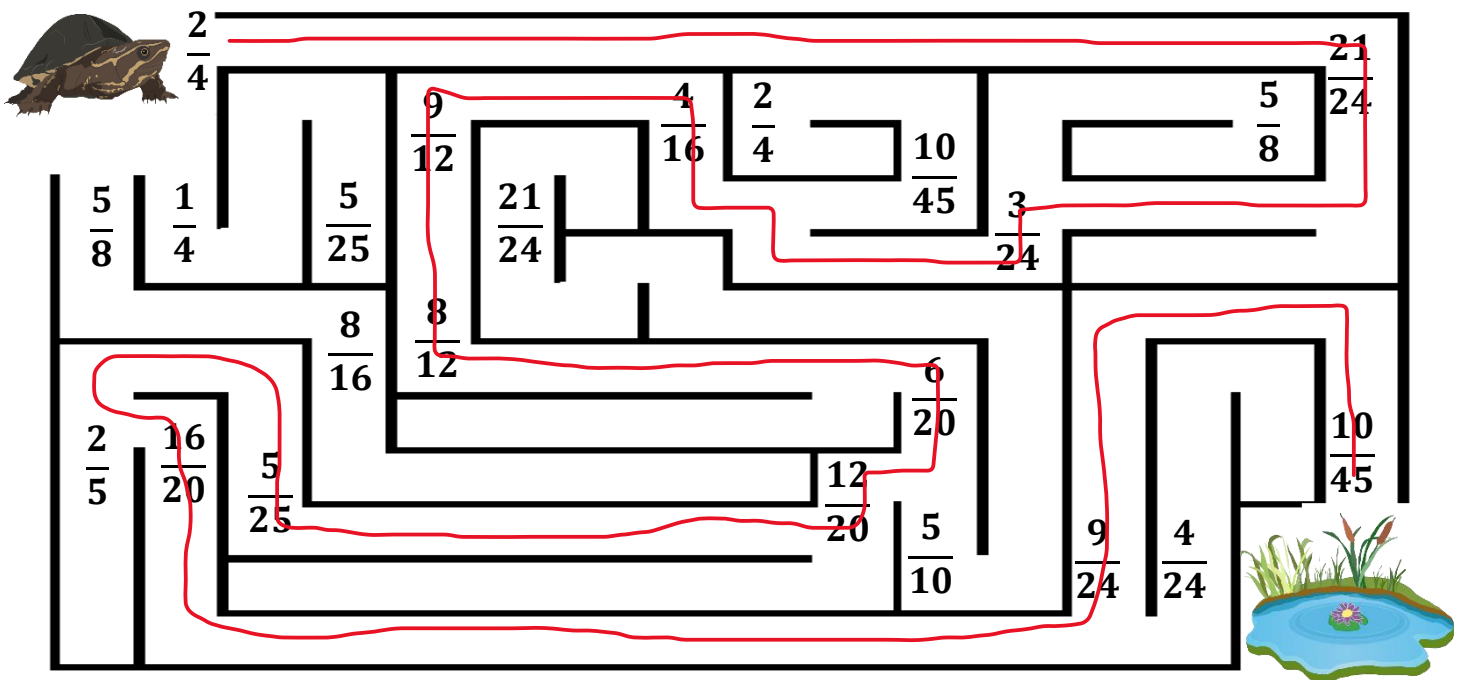
## My Notes

# Equivalent Fractions

Mica the Musk Turtle needs help! She has just laid a nest of turtle eggs along side the road and needs help to find her way back to the wetland.

Question 1. Follow the path from Mica to the wetland as you find a fraction equivalent to the fractions given below. Write the correct equivalent fraction that you have found in the blank.

- |                                  |                                  |                                 |                                   |                                  |                                   |
|----------------------------------|----------------------------------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------------|
| 1. $\frac{1}{2} = \frac{2}{4}$   | 2. $\frac{7}{8} = \frac{21}{24}$ | 3. $\frac{1}{8} = \frac{3}{24}$ | 4. $\frac{1}{4} = \frac{4}{16}$   | 5. $\frac{3}{4} = \frac{9}{12}$  | 6. $\frac{2}{3} = \frac{8}{12}$   |
| 7. $\frac{3}{10} = \frac{6}{20}$ | 8. $\frac{3}{5} = \frac{12}{20}$ | 9. $\frac{1}{5} = \frac{5}{25}$ | 10. $\frac{4}{5} = \frac{16}{20}$ | 11. $\frac{3}{8} = \frac{9}{24}$ | 12. $\frac{2}{9} = \frac{10}{45}$ |



The maze contains the following fractions in its walls:

- Top left:  $\frac{2}{4}$  (start)
- Top right:  $\frac{21}{24}$  (end)
- Left side (top to bottom):  $\frac{5}{8}$ ,  $\frac{1}{4}$ ,  $\frac{2}{5}$
- Bottom left:  $\frac{16}{20}$ ,  $\frac{5}{25}$
- Bottom center:  $\frac{12}{20}$ ,  $\frac{5}{10}$
- Bottom right:  $\frac{9}{24}$ ,  $\frac{4}{24}$
- Right side (top to bottom):  $\frac{5}{8}$ ,  $\frac{10}{45}$
- Interior (top to bottom):  $\frac{9}{12}$ ,  $\frac{4}{16}$ ,  $\frac{2}{4}$ ,  $\frac{10}{45}$ ,  $\frac{3}{24}$ ,  $\frac{8}{16}$ ,  $\frac{8}{12}$ ,  $\frac{6}{20}$

The red path starts at the turtle, goes right to  $\frac{21}{24}$ , then down to  $\frac{5}{8}$ , then left to  $\frac{10}{45}$ , then down to  $\frac{3}{24}$ , then left to  $\frac{4}{16}$ , then down to  $\frac{9}{12}$ , then left to  $\frac{8}{16}$ , then down to  $\frac{8}{12}$ , then left to  $\frac{6}{20}$ , then down to  $\frac{12}{20}$ , then left to  $\frac{5}{10}$ , then down to  $\frac{9}{24}$ , then left to  $\frac{4}{24}$ , then down to  $\frac{10}{45}$ , and finally left to the wetland.

Question 2. If Mica laid 8 eggs in total, and only 4 made it to adulthood... what is the ratio of turtles that survived compared to the number that were born? Write this number as a fraction? Can this fraction be reduced?

Ratio: 4:8      Fraction:  $\frac{4}{8}$       Reduced Fraction:  $\frac{1}{2}$

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2.  $\frac{7}{8} =$

3.  $\frac{1}{8} =$

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

5.  $\frac{3}{4} =$

6.  $\frac{2}{3} =$

7.  $\frac{3}{10} =$

8.  $\frac{3}{5} =$

9.  $\frac{1}{5} =$

10.  $\frac{4}{5} =$

11.  $\frac{3}{8} =$

12.  $\frac{2}{9} =$



Question 2. If Mica laid 8 eggs in total, and only 4 made it to adulthood... what is the ratio of turtles that survived compared to the number that were born? Write this number as a fraction? Can this fraction be reduced?

Ratio: \_\_\_\_\_

Fraction: \_\_\_\_\_

Reduced Fraction: \_\_\_\_\_