# Alice in Wonderland Jr.

**March 7-16, 2024**

**Fridays & Saturdays at 7:30 pm**
**Sundays at 3:00 pm**

**2nd Street Stage**
**Hannah Block Historic USO/Community Arts Center**
**120 South 2nd Street**

Fall down the rabbit hole with Alice as she navigates the curious world of Wonderland on a journey of self-discovery. When young Alice finds herself in a strange world where everything seems upside down, she must find her way home…and find herself along the way. As she travels through Wonderland, she encounters all of the iconic characters that audiences have come to love: including the ever-tardy White Rabbit, the grinning Cheshire Cat, a cool Caterpillar, the wacky Mad Hatter, and the hot-tempered Queen of Hearts.

## About the Thalian Association

Thalian Association Community Theatre is a non-profit, membership organization that's dedicated to enhancing the rich artistic environment of the Cape Fear region. Tracing its roots back to 1788, the Thalian Association Community Theatre was founded to provide arts education and bring the excitement of the performing arts to Wilmington, North Carolina. Today the Thalian Association Community Theatre produces five major productions annually on the Main Stage at historic Thalian Hall, offers a Youth Theatre program and professionally manages the Hannah Block Historic USO/Community Arts Center for the City of Wilmington. In 2007, the North Carolina legislature named the Thalian Association Community Theatre the Official Community Theater of North Carolina.

# Wonderland Math

In the musical *Alice in Wonderland Jr.*, Alice grows and shrinks to various sizes during her wacky adventures. As a result, the part of Alice is split up into three distinct roles played by three different actors: Small Alice, Alice, and Tall Alice. After falling asleep and finding herself in a magical world, Alice meets many interesting characters as she journeys through Wonderland and tries to discover where – and who– she really is.



Answer the questions below to find out what happens to Alice!



Alice is 54 inches tall when she begins her adventure by falling down a rabbit hole while trying to catch up to the White Rabbit. When Alice reaches the bottom of the rabbit hole she finds a talking doorknob that tells her of a magical land called Wonderland on the other side of the door. However, Alice is 2 feet too tall to fit into Wonderland. The talking doorknob tells her to take a drink of a potion that will shrink Alice down by 2 feet so she can fit through the door and get inside Wonderland.

1.  How many inches does Alice need to shrink in order to become Small Alice and successfully fit into Wonderland? Create a formula to help you solve the problem using the symbol X as the unknown element in your equation.

2. How many inches will Small Alice be after she is done shrinking from the potion? Create a formula to help you solve the problem using the symbol X as the unknown element in your equation.

After Alice shrinks to become Small Alice, the talking doorknob tells her that in order to get into Wonderland they need the key to unlock the door. However, Small Alice is too tiny to get the key! The doorknob tells Small Alice to eat a bite of a cookie that will make her grow 72 inches so she is tall enough to get the key and unlock the door.

3. How many inches will Tall Alice be after Small Alice eats the cookie in order to grow large enough to retrieve the key to the door leading to Wonderland? Use your answer to Question 2 to help you answer this question. Create a formula to help you solve the problem using the symbol X as the unknown element in your equation.

Now that she has the key to the door, Tall Alice still can't get into Wonderland because now she is too big to fit through the door again! Tall Alice begins to cry, and the room quickly fills with her enormous tears. To escape, she takes another sip of the shrinking potion and shrinks down to 1/6th of Tall Alice's size so that she can swim through the door's keyhole and finally reach Wonderland.

4. How many inches tall will Small Alice be after shrinking down to 1/6th of Tall Alice's size? Use your answer to Question 3 to help you answer this question. Create a formula to help you solve the problem using the symbol X as the unknown element in your equation.

On the other side of the door, Small Alice is far too tiny to travel through Wonderland. She encounters a Dodo Bird that presents Small Alice with a cookie that will restore her to her regular size.

5. If Alice's regular size is 54 inches tall, how many inches does Small Alice need to grow? Use your answer to Question 4 to help you answer this question. Create a formula to help you solve the problem using the symbol X as the unknown element in your equation.

NC State Standards – CCR Anchor Standards NC.6.EE.6, NC.6.EE.7, NC.7.NS.2

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After eating the cookie to restore her to normal size, Alice finally catches up to the White Rabbit. The White Rabbit is in his house searching frantically for a pair of white gloves. Alice offers to help the White Rabbit search for his gloves, but while looking for the gloves Alice takes another bite of a cookie and suddenly grows so large that she busts through the White Rabbit's house and becomes Tall Alice.

6. If Tall Alice is 216 inches tall after eating the cookie at the White Rabbit's house, how many inches did she grow? Use some of the information you learned from Question 5 to help you answer this question. Create a formula to help you solve the problem using the symbol X as the unknown element in your equation.
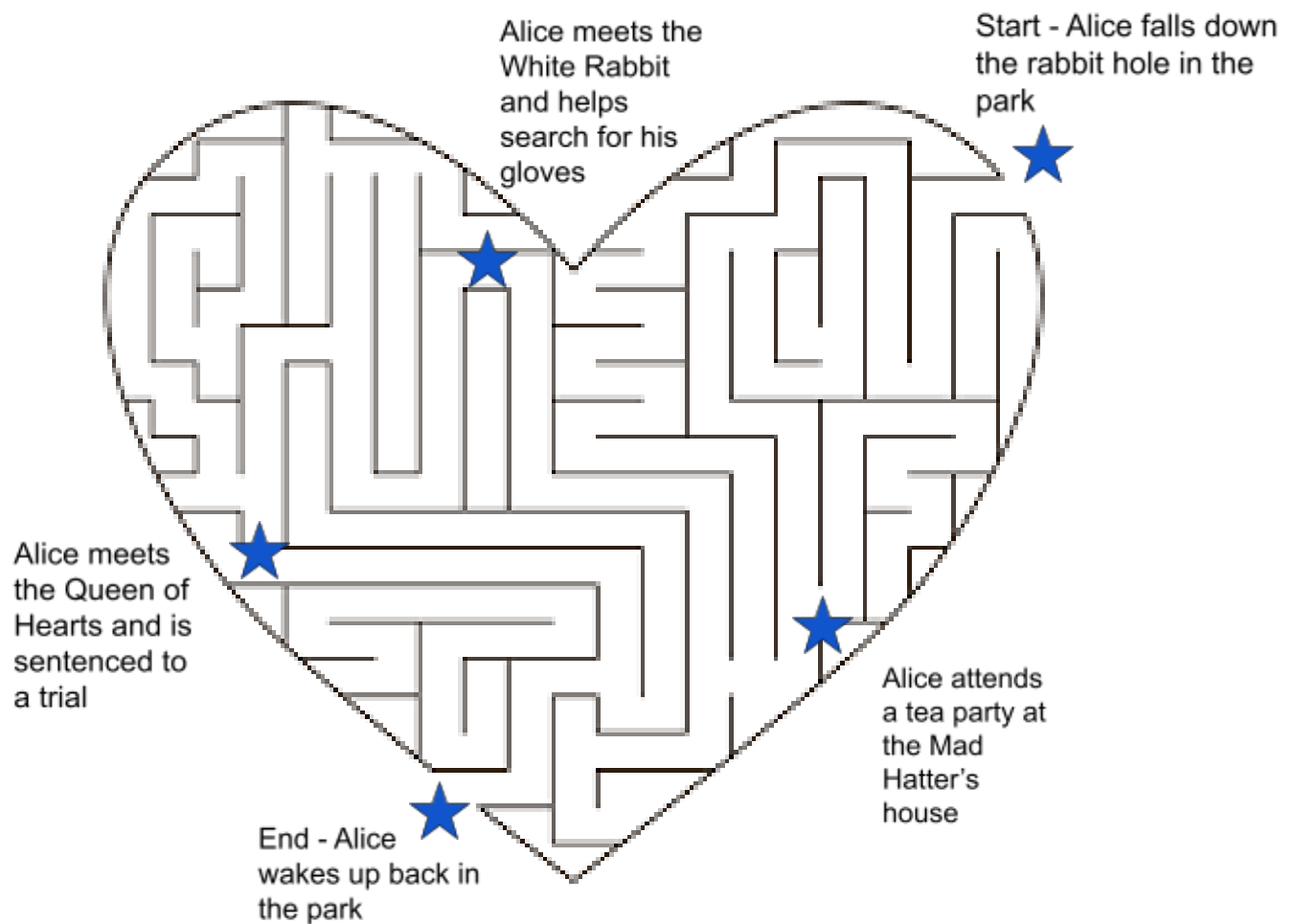
After Tall Alice eats the cookie and grows so large that she can't fit into the White Rabbit's house, she is desperate to find a way to shrink again. Tall Alice comes across a carrot and takes a bite, causing her to shrink to only 3 inches tall!

7. If Small Alice is only 3 inches tall after eating the carrot, how many inches did she shrink? Use some of the information you learned from Question 6 to help you answer this question. Create a formula to help you solve the problem using the symbol X as the unknown element in your equation.

# Maze Activity - Help Alice Journey through Wonderland!

Complete the following maze activity to help Alice journey through Wonderland. As you solve the maze from beginning to end, make sure you pass through every location that is marked with a blue star.



Alice meets the White Rabbit and helps search for his gloves

Start - Alice falls down the rabbit hole in the park

Alice meets the Queen of Hearts and is sentenced to a trial

Alice attends a tea party at the Mad Hatter's house

End - Alice wakes up back in the park

## Answer Key

1. $2 \times 12 = X$

   $X = 24$ inches

2. $54 - 24 = X$

   $X = 30$ inches

3. $30 + 72 = X$

   $X = 102$ inches

4. $(\frac{1}{6}) \times 102 = X$

   $\frac{1}{6} = 0.167 \times 102 = 17$

   $X = 17$ inches

5. $17 + =X = 54$

   $54 - 17 = 37$

   $X = 37$ inches

6. $54 + x = 216$

   $216 - 54 = 162$

   $X = 162$ inches

7. $216 - X = 3$ inches

   $216 - 3 = 213$

   $X = 213$ inches