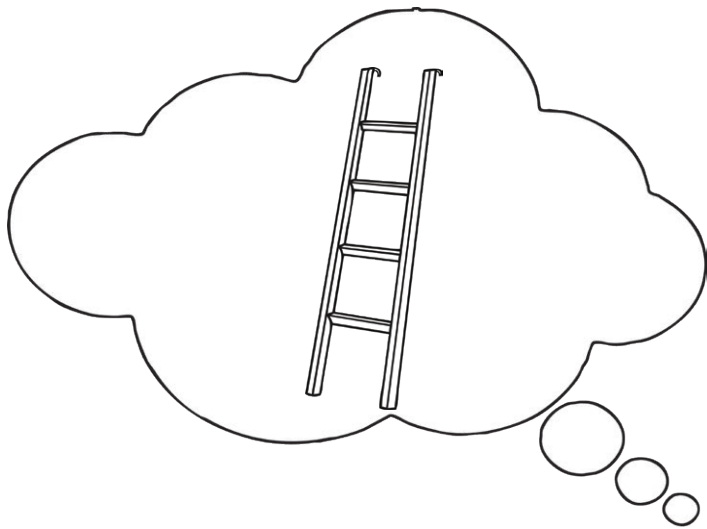


# The Mystery of the Lifted Ladders

Johnson Street Elementary School just finished an amazing fundraiser to build a playground at their school. They were able to purchase top-of-the-line equipment. Their new playground has swings, slides, a zip line, monkey bars, picnic tables, and balance bridges. The students and teachers are so excited for the equipment to be installed. They cannot wait to enjoy the new equipment!

The big day finally arrived. The maintenance team showed up to install all the new equipment for the playground at Johnson Street. They began unwrapping pipes, planks, and nuts and bolts. As they took inventory of the supplies, they realized—there were no ladders in the shipment! The children cannot slide down the slides, access the balance bridges, or grab on to the zip line without the ladders! The maintenance team called the front office to confirm that the ladders were part of the shipment when it arrived. They were! The principal signed off that every piece of equipment made it safely to Johnson Street. Someone lifted the ladders! Who would do such a thing?

You are the lead detective on this case. Can you work out the clues to solve this mystery? You must find the Ladder Lifter to bring joy to the students of Johnson Street Elementary School.



## Suspect List

Below is a list of students, teachers, and parents who have been suspected in participating in the heist. Use the clues to eliminate the falsely accused suspects and find the real ladder lifter!

Name	Gender	Shoe Size	Hair Color	Sweater Color	Role
Veronica Hudson	Female	2	Red	Red	Student
Jamal Wilkins	Male	4	Blonde	Blue	Student
Thomas Avery	Male	10	Brown	Blue	Teacher
Fatimah Moore	Female	7	Brown	Red	Parent
Chankre Patel	Male	4	Brown	Green	Student
Raul Martinez	Male	10	Brown	Blue	Parent
Liam Amesworthy	Male	10	Black	Blue	Parent
Riya Patel	Female	7	Black	Green	Parent
Valerie Crum	Female	2	Black	Green	Student
Wyatt Pappalardo	Male	9	Blonde	Red	Student
Hayworth Hopkins	Male	8	Brown	Yellow	Teacher
Jose Smith	Male	8	Black	Yellow	Teacher
Nathael Hawkins	Male	10	Brown	Red	Parent
Andrea Douglas	Female	10	Black	Blue	Teacher
Roberto Diaz	Male	2	Brown	Red	Student
Amaris Valasquez	Female	9	Brown	Red	Teacher
Nicolas Giroudon	Male	4	Brown	Red	Student
Lillian Tillis	Female	10	Blonde	Yellow	Parent
Christopher Payne	Male	8	Brown	Red	Teacher
Tiffany Pilar	Female	2	Brown	Yellow	Parent
Zameda Gachuru	Female	7	Brown	Blue	Teacher
Remus Johnson	Male	8	Red	Red	Parent
Larry Kidist	Male	4	Black	Yellow	Student
Michelle Han	Female	8	Blonde	Red	Student
Eduardo Jackson	Male	6	Brown	Red	Student

### Clue 1:

A clothing fiber was found in the packaging of the recess equipment. Solve the problems below to determine what color the fiber was. This will tell you the color sweater the Ladder Lifter was wearing.

Look at the fractions below. Each one is equivalent to  $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{1}{4}$ , or  $\frac{3}{4}$ . Determine the equivalent fraction.

$\frac{2}{8}$	$\frac{3}{6}$	$\frac{4}{16}$	$\frac{2}{4}$	$\frac{4}{8}$
$\frac{2}{6}$	$\frac{3}{12}$	$\frac{5}{20}$	$\frac{7}{14}$	$\frac{3}{9}$
$\frac{6}{8}$	$\frac{6}{12}$	$\frac{9}{12}$	$\frac{5}{10}$	$\frac{12}{16}$

If most of the fractions were equivalent to  $\frac{1}{2}$ , the fiber was red.

If most of the fractions were equivalent to  $\frac{1}{3}$ , the fiber was green.

If most of the fractions were equivalent to  $\frac{1}{4}$ , the fiber was yellow.

If most of the fractions were equivalent to  $\frac{3}{4}$ , the fiber was blue.



The Ladder Lifter was wearing a \_\_\_\_\_ sweater.

## Clue 2:

You checked every suspect's schedule for the day. Only certain groups of people were in the office with the recess equipment. You think you've discovered if a teacher, parent, or student is the Ladder Lifter. Solve the problems below and use the answers to confirm your hunch.

2 The	7 Teacher	1 Is	8 Recess
9 Parent	4 Ladder	9 Does	5 A
6 Student	10 Not	3 Lifter	11 Will

$$\frac{1}{2} = \frac{\square}{4}$$

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

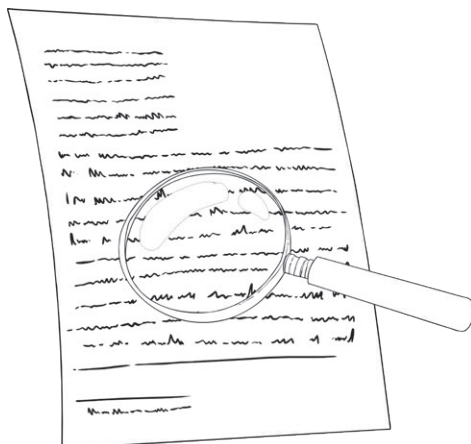
$$\frac{1}{4} = \frac{\square}{12}$$

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

$$\frac{1}{2} = \frac{\square}{10}$$





$$\frac{1}{3} = \frac{\square}{18}$$

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_,  
\_\_\_\_\_, \_\_\_\_\_!



### Clue 3:

Security footage shows a figure lurking near the new equipment. You think you can identify if the suspect is a male or female. If most of the problems in the left column are correct, the ladder lifter is male. If most problems in the right column are correct, the ladder lifter is female.

Male			Female	
$\frac{3}{6} = \frac{1}{2}$	Correct Or Incorrect		$\frac{2}{3} = \frac{4}{6}$	Correct Or Incorrect
$\frac{1}{3} < \frac{1}{4}$	Correct Or Incorrect		$\frac{1}{6} = \frac{4}{6}$	Correct Or Incorrect
$\frac{3}{5} = \frac{2}{3}$	Correct Or Incorrect		$\frac{2}{3} > \frac{1}{3}$	Correct Or Incorrect
$\frac{1}{4} = \frac{2}{8}$	Correct Or Incorrect		$\frac{5}{10} = \frac{2}{6}$	Correct Or Incorrect
$\frac{4}{8} > \frac{2}{8}$	Correct Or Incorrect		$\frac{1}{4} > \frac{2}{8}$	Correct Or Incorrect

The Ladder Lifter is \_\_\_\_\_.

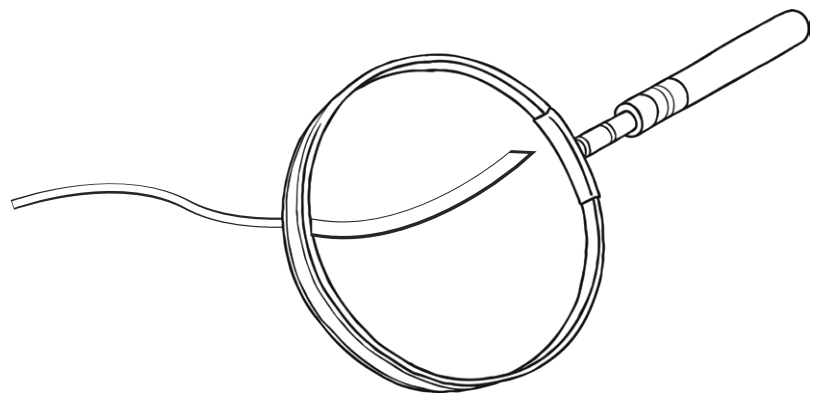
### Clue 4:

You found a strand of hair at the scene of the crime! What color is the suspect's hair? Solve the problems below. Match the answer to the letters in the table. Write the letter on the lines provided to solve the clue!

A: 10	B: 4	C: $\frac{1}{4}$	D: 3	E: 2	F: 14
G: 0	H: 11	I: 10	J: 21	K: 30	L: 1
M: $\frac{1}{2}$	N: 8	O: 6	P: 16	Q: 13	R: 17
S: 15	T: 9	U: 7	V: 25	W: 5	X: $\frac{1}{3}$
Y: 20	Z: $\frac{3}{4}$				

$\frac{6}{\square} = \frac{3}{4}$	$\frac{2}{4} = \frac{\square}{12}$	$\frac{1}{3} = \frac{3}{\square}$
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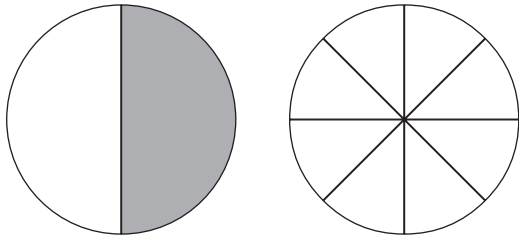
$\frac{2}{8} = \frac{1}{\square}$	$\frac{\square}{8} = \frac{2}{16}$	$\frac{3}{4} = \frac{\square}{8}$	$\frac{4}{\square} = \frac{1}{2}$	$\frac{2}{\square} = \frac{4}{6}$	$\frac{1}{\square} = \frac{2}{4}$
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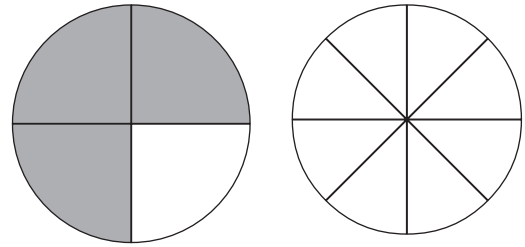
The Ladder Lifter's hair is \_\_\_\_\_.

## Clue 5:

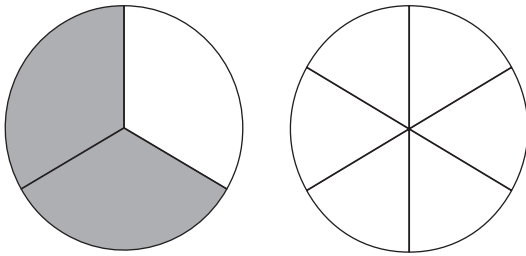
You found a shoe print in the mud by the playground area outside. Solve the problems below. The number used most often tells you the shoe size of the Ladder Lifter!



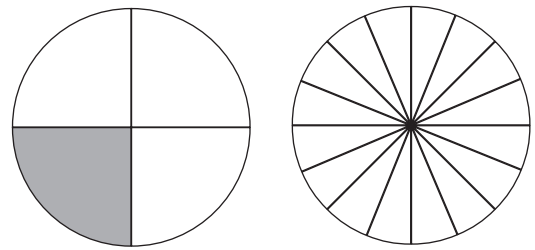
One-half is equivalent to how many eighths? \_\_\_\_\_



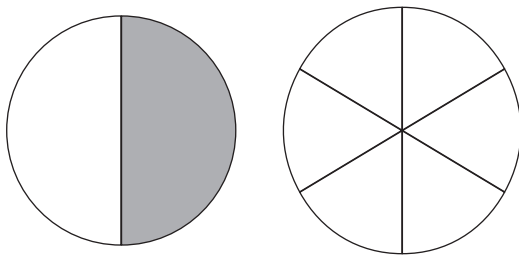
Three-fourths is equivalent to how many eighths? \_\_\_\_\_



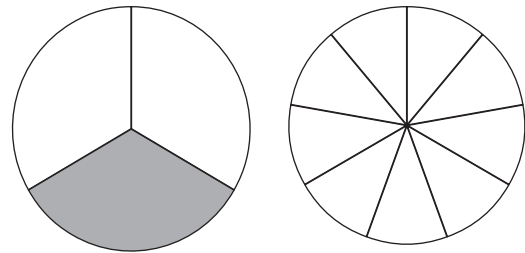
Two-thirds is equivalent to how many sixths? \_\_\_\_\_



One-fourth is equivalent to how many sixteenths? \_\_\_\_\_



One-half is equivalent to how many sixths? \_\_\_\_\_



One-third is equivalent to how many ninths? \_\_\_\_\_

What size shoe does the Ladder Lifter wear? \_\_\_\_\_.

The Ladder Lifter is \_\_\_\_\_.



# The Mystery of the Lifted Ladders **Answers**

Clue 1:

$\frac{2}{8}$	$\frac{3}{6}$	$\frac{4}{16}$	$\frac{2}{4}$	$\frac{4}{8}$
$\frac{2}{6}$	$\frac{3}{12}$	$\frac{5}{20}$	$\frac{7}{14}$	$\frac{3}{9}$
$\frac{6}{8}$	$\frac{6}{12}$	$\frac{9}{12}$	$\frac{5}{10}$	$\frac{12}{16}$

The Ladder Lifter was wearing a red sweater.

Clue 2:

$$\frac{1}{2} = \frac{2}{4}$$

$$\frac{2}{3} = \frac{4}{6}$$

$$\frac{1}{4} = \frac{3}{12}$$

$$\frac{3}{6} = \frac{1}{2}$$

$$\frac{1}{2} = \frac{5}{10}$$

$$\frac{1}{3} = \frac{6}{18}$$

The Ladder Lifter is a **student!**



Clue 3:

Male

$$\frac{3}{6} = \frac{1}{2} \quad \text{Correct}$$

$$\frac{1}{3} < \frac{1}{4} \quad \text{Incorrect}$$

$$\frac{3}{5} = \frac{2}{3} \quad \text{Incorrect}$$

$$\frac{1}{4} = \frac{2}{8} \quad \text{Correct}$$

$$\frac{4}{8} > \frac{2}{8} \quad \text{Correct}$$

Female

$$\frac{2}{3} = \frac{4}{6} \quad \text{Correct}$$

$$\frac{1}{6} = \frac{4}{6} \quad \text{Incorrect}$$

$$\frac{2}{3} > \frac{1}{3} \quad \text{Correct}$$

$$\frac{5}{10} = \frac{2}{6} \quad \text{Incorrect}$$

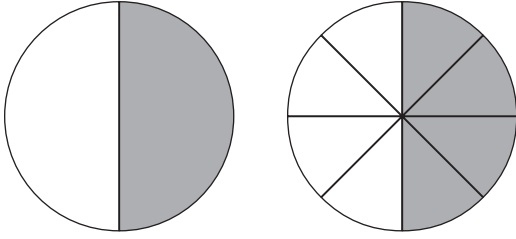
$$\frac{1}{4} > \frac{2}{8} \quad \text{Incorrect}$$

The Ladder Lifter is **male**.

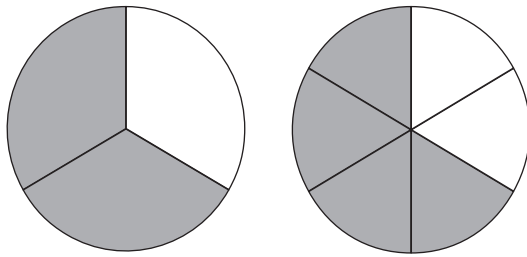
Clue 4:

The Ladder Lifter is **not blonde**.

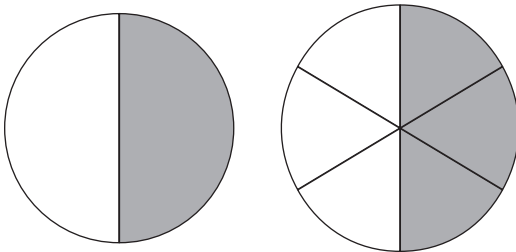
Clue 5:



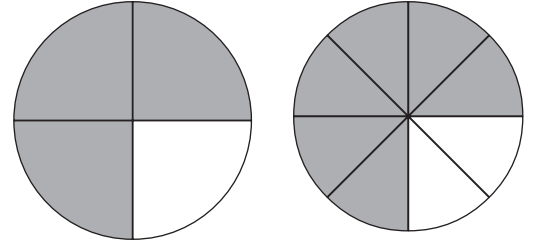
One-half is equivalent to how many eighths? **4**



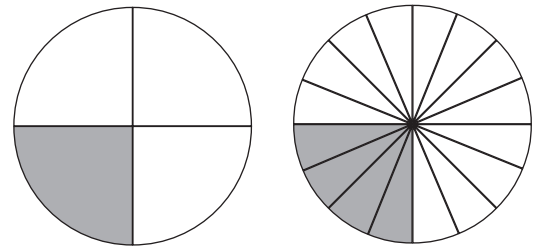
Two-thirds is equivalent to how many sixths? **4**



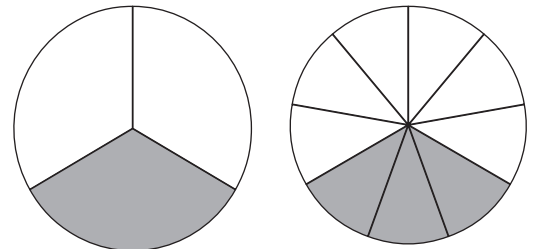
One-half is equivalent to how many sixths? **3**



Three-fourths is equivalent to how many eighths? **6**



One-fourth is equivalent to how many sixteenths? **4**



One-third is equivalent to how many ninths? **3**

What size shoe does the Ladder Lifter wear? **4**

The Ladder Lifter is **Nicolas Giroudon**.