Reasoning and Problem Solving - Fractions



"Hello children, welcome to Fraction Frenzy! I'm your host, Deeeean Ominator! We've got some Brilliant Brainiacs ready to strain their brains today over some very tricky puzzles. They must solve all my riddles in less than one hour to have a chance at winning a very exciting prize!"



The contestants were excited to start. "I wonder what the prize will be!" whispered Lina to her giggling teammates, Tamara, Ted and Jing.

"Alright children, settle down and get ready! Here's your first clue — let's start the clock!" Dean Ominator took a small piece of paper out of his pocket and read it loudly into his microphone.



"What could this possibly mean?" groaned Ted as a big red clock started counting down from 60 minutes.

"Maybe we have to add them together... or... put them in our shoes... or... Hey! I've got it!" exclaimed Jing. "We need to match up the pairs!"

1. Help the children find the key to unlock the next clue by matching the pairs and finding the odd one out.



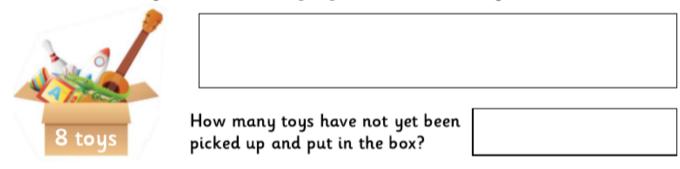
Which key should the children use?

Ted opens the box with the key. "Hooray, it worked! Let's see, there's 8 toys in here... and the next riddle!" He took a piece of paper out of the box and read it aloud.

If this is one quarter, the whole must be more. How many toys have been left on the floor?

The children were quiet for a moment while they thought about the clue. "I think he means he's picked up one quarter of his toys and we need to figure out how many there should be in total!" exclaimed Lina. "My mum's always on about tidying, too!"

2. Use the clue to figure out how many toys there must be altogether.



"Brilliant, let's keep going! Has anybody found the third clue?" shouted Lina.

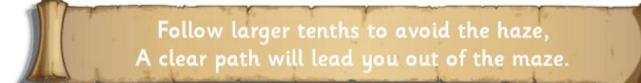
"I have! Over here, quick!" Tamara was standing in front of a door with a funny looking combination lock. "It looks like it needs three fractions to open."

Count on in tenths, don't miss a beat, Find each sixth number and you're in for a treat!

3. Count on starting with each fraction on the scroll. What's the combination to open the door? Use the riddle to help you.



Ted entered the combination and the door creaked open. "It worked, but it's really dark in there!" he mumbled to the team. "Is this the next clue stuck on the wall? It looks different than the others."



"Oh, jeepers! It's a dark, scary maze!" Jing trembled. "I don't like the dark!"

"Don't worry, everybody! I know how to find the way out!" Lina declared.

4. Find the way out of the maze by moving only onto larger tenths.

entrance 0.2	0.4	0.3	1.7	1.3
0.6	0.5	11	0.8	0.9
0.1	0.7	0.9	1.1	1.2
1.4	0.6	0.8	1.9	1.7
1.5	0.9	1.2	1.4	2.3 exit

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0.1	0.7	0.9	1.1	1.2					
1.4	0.6	0.8	1.9	1.7					
1.5	0.9	1.2	1.4	2.3 exit					
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The children ran through the maze using the path they calculated and found the exit in a flash!

"Brilliant work, team! We must be nearly finished Dean's riddles by now!" Cheered Tamara.

"This is unheard of!" Dean Ominator groaned to the audience. "Nobody has ever made it out that quickly - these children are getting dangerously close to winning the prize! Nevermind, this next clue should set them back a little!"

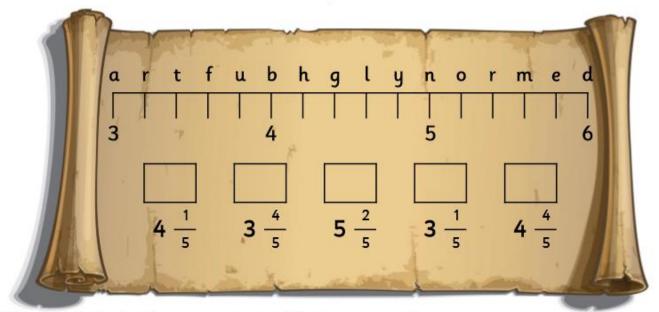
> Half is twelve, one third is eight, How many more minutes before you're too late?

How long do the children have before the	timer	runs	out?
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- 1	
- 1	
- 1	
- 1	
- 1	
- 1	
- 1	
- 1	
- 1	
- 1	

Each fraction belongs on the number line. If you can't find the message, the prize is all mine!

6. "Oh fantastic! These puzzles are my favourite!" exclaims Ted as he gets to work figuring out the code. Help him by finding where each fraction should go and writing each letter in the box to reveal the message.



"What?! Well, that's not very helpful!" Jing groaned.

"Yeah, we already knew that, Mr Ominator!" laughed Lina.

"Quickly, everyone! Here's the next clue!" Tamara exclaimed.



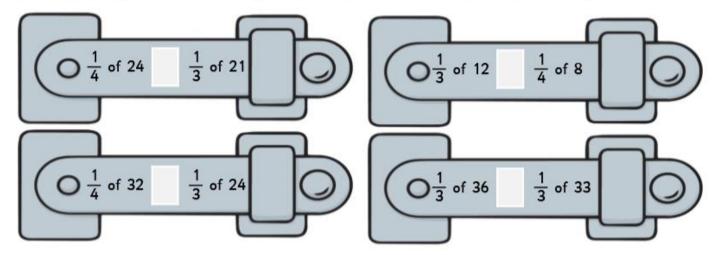
7. Write as many fractions as you can to represent the jewels.



Complete each of the statements to open the gate. There's no time for error, the clock will not wait!

8. "Oh no, we only have three minutes left!" exclaimed Ted. "Let's open this gate, quick!"

The children got to work filling in <, > and = to unlock the bolts on the gate.



9. The gate swung open, and there he was! Dean Ominator in front of his live studio audience, and everyone was cheering like crazy! The children were amazed.

"Very impressive, children! You have proven yourselves to be very clever contestants, indeed! Your final challenge is choosing your prize. You have ten seconds to answer: would you rather have two pizzas to share between you, or one quarter of 4 pizzas each?"

What should the children choose? Why?

"Congratulations children, you have won this round of Fraction Frenzy! We hope to see you next week for a brand new team and some brand new challenges. I'm Dean Ominator, goodnight!"

