

Math Challenge #5



First Name: _____	Last Name: _____	Grade: _____
Teacher: _____	Parent's email: _____	




Trips and Vacations

Welcome to Math Challenge #5. Within this challenge, we delve into mathematical problems that often arise when planning and embarking on trips and vacations. Traveling and vacationing offer countless opportunities to apply mathematical concepts to real-life scenarios. From calculating distances and travel times to managing budgets and itineraries, these math problems are fun to solve.

If you are new to any of the problem solving strategies, check out our complete overview of elementary problem-solving strategies at <https://www.mathinaction.org/problem-solving-strategies.html>.

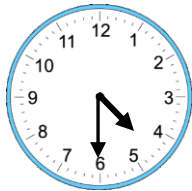
Kinder & First Grade: solve at least 3 problems.
Second & Third Grade: solve at least 7 problems.
Fourth Grade and above: solve at least 12 problems.

Answer

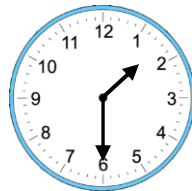
1.	Liam is going on a plane ride from Seattle to Tokyo, and the flight takes 11 hours. If he has been on the plane for 3 hours already, how many more hours does he need to be on the plane before reaching his destination?		
2.	Sarah is packing for a camping trip, and she wants to bring 8 granola bars. She has already packed 2 almond granola bars and 3 peanut butter granola bars into her backpack. How many additional granola bars must she include in her packing?		
3.		Emily is going on a train ride, and the tickets cost \$6 each. She is bringing her two friends. How much money will they need to buy tickets for all three of them?	
4.	Shelby boards a minibus that has seats for 30 passengers. She counts that there are 7 empty seats before sitting down in one of them. Assuming each non-empty seat had one passenger in it, how many passengers are on the minibus now?		
5.	The Kilstroms are on the way to Grandma's house which is located 24 miles away. When they reach the halfway point, how many additional miles do they need to travel to reach Grandma's house?		
6.	Alexa is taking a train from Seattle to Eugene. The train ride takes about 6 hours and 45 minutes. If the train departs at 8:45 a.m., what time will she arrive in Eugene?		
7.	A train service runs every 15 minutes. If the second train is at 8:25 a.m., how many trains are there between 8 a.m. and 11 a.m. altogether?		

8.	The Grade 3 and Grade 4 classes are going on a field trip to the salmon hatchery. There are 167 students, 7 teachers, and 18 parent volunteers who will be travelling by school buses to the salmon hatchery. Given that each bus can accommodate up to 48 passengers, what is the minimum number of buses required for this field trip?	
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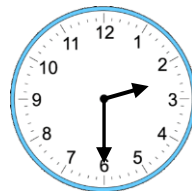
Use this information to solve the following three problems. The clocks show the times in three cities at the same time.



Sydney
Sun, 4:30 p.m.



Singapore
Sun, 1:30 p.m.




Tokyo
Sun, 2:30 p.m.

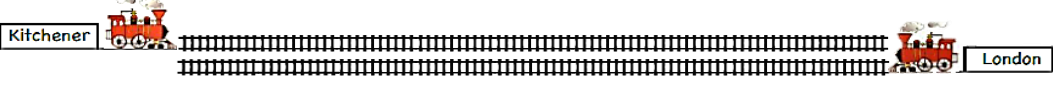

9.	Sylvia, who lives in Sydney, calls her cousin Tommy in Singapore on Saturday at 8 p.m. What time does Tommy get the call in Singapore?	
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10.	The Willis family took a flight from Singapore to Tokyo. The 7 hour flight left from Singapore at 11 p.m. What time did their flight land in Tokyo?	
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11.	The Nanda family plans to travel from Tokyo to Sydney on December 16. They book a flight that leaves from Narita (Tokyo International Airport) to Sydney Kingsford Smith Airport (Sydney's International Airport) at 10 p.m. The estimated flight time is 9 hours and 50 minutes. At what date and time (in Sydney) will their flight be estimated to arrive?	
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12.	Driving home from her grandma's house, Ming notices that her gas gauge is showing that a mere $\frac{1}{10}$ of a tank remains. Luckily, just then, she spots a 24-hour gas station. She has just enough money to add 20 liters of gas to the tank, bringing her gas tank up to one-half full. What is the full capacity, in liters, of Ming's gas tank?		
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13.	On a certain airplane, the rows are numbered from 1 to 30, but there is no row number 13. Row 23 has only 4 passenger seats, and all other rows have 6 passenger seats. If the plane is three-fourths full, how many seats are empty?	
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14.	<p>Leema took a train from Kitchener to London. The two stations are 100 km apart on a straight section of railroad. She took a train that leaves Kitchener station at noon. Louise took a train from London to Kitchener. It also leaves London Station at noon, and travels toward Kitchener Station on a parallel track. If the train from Kitchener is travelling at 60 km per hour, and the train from London is travelling at 90 km per hour, what is the time that the trains begin to pass each other?</p> 		
15.	<p>A group of friends is going on a road trip across the United States. They plan to drive from Seattle to New York, a distance of 2,800 miles. If their car gets 25 miles per gallon of gas and the average price of gas is \$4.55 per gallon, how much will they spend on gas for the entire trip one way?</p>		
16.	<p>Ariel's family was driving to visit the Olympic National Park. They left home and drove for 2.5 hours at the rate of 55 miles per hour. On the way, they stopped for a quick lunch and drove another 1.5 hours at the rate of 45 miles per hour to reach their destination. What is the distance (in miles) from Ariel's home to the Olympic National Park?</p>		
17.	<p>The Leung family is planning a trip to Europe. Their flight from New York to Paris costs \$760 per person, and there are five family members. Additionally, they will need to exchange their U.S. dollars for Euros at an exchange rate of 1 USD = 0.94 EUR.</p> <p>a. How much will they spend on flights in USD?</p> <p>b. How many Euros will they receive for their U.S. dollars if they exchange \$2,000?</p>	<p>a.</p> <p>b.</p>	
18.	<p>The Willis family is going on a trip to Portland and back. It is 343 miles from home to Portland. Determine the total cost of the gas for the Willis family's trip to Portland and back if the cost of gas is \$4.90 per gallon and the family car gets 28 miles per gallon.</p>		

Solution is available on December 8, 2023
www.mathinaction.org