THIRD SPACE LEARNING

Themed Math Problems

Set 1

September - December

4th grade

THIRD SPACE LEARNING

Labor Day

First Monday of September

Today, we honor American workers for their many contributions to our country's prosperity and achievements. We take today as a day of rest and contemplation, to thank those for their hard work and dedication, and for their continual labor in the workforce.

Question

If you work a job for 40 hours in a week, how much would you make if you earn $9 per hour? $10 per hour? $18 per hour? Discuss with a friend how you would figure out how much you would make at each of these rates.

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THIRD SPACE LEARNING

Indigenous Peoples' Day / Columbus Day

Second Monday in October

Today, we remember our history as the Americas by acknowledging Christopher Columbus who explored from Europe to the Americas in 1492. We also remember indigenous peoples who were inhabiting the Americas at that time, by honoring their culture and customs that were affected by the explorers who arrived there.

Question

In honor of Indigenous Peoples' day, students decided to make dream catchers. They had 100 feet of yarn, and each dream catcher requires 2 feet. How many dream catchers can the students make?

A larger dream catcher requires 4 feet. How many large dream catchers can be made with 100 feet of yarn?

Discuss with a friend different combinations of small and large dream catchers using all 100 feet of yarn.

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THIRD SPACE LEARNING

World Food Day

October 16th

Today is World Food Day, a day celebrated by many to bring awareness to hunger and food security around the world.

Question

On World Food Day, a local food bank distributed food packages to families in need. Each food package contains 5 cans of vegetables, 3 cans of soup, and 2 bags of rice. If they prepared 50 packages, how many cans of vegetables did they distribute? Cans of soup? Bags of rice?
Discuss with a friend how you would figure out how much of each item was in 25 packages.

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THIRD SPACE LEARNING

Halloween

October 31st

Happy Halloween! Today, people around the world celebrate this holiday with traditions such as trick-or-treating, carving jack-o-lanterns, wearing costumes, and eating candy.

Question

For a Halloween party, each guest is supposed to receive 3 pieces of candy. The candy bags at the store come in packs of 24. If there are 32 guests at the party, how many bags of candy are needed?

Discuss with a friend how you would figure out how many bags were needed if there were 48 pieces of candy in each pack.

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THIRD SPACE LEARNING

Diwali

Date varies every year, November 8th 2026

Today is the start of Diwali, the festival of lights, India's most important holiday of the year. The holiday is celebrated for five days with special activities planned for each day. India marks the new year during their celebration of Diwali.

Question

A family is decorating their home for Diwali. They have a string of fairy lights with a total length of 30 meters. They want to hang lanterns on the string, and each lantern requires 2 meters of space. If they want to space the lanterns equally along the entire string, how many lanterns can they hang up? What if there were 90 meters of fairy lights? Discuss with a friend how you would solve this problem.

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THIRD SPACE LEARNING

World Science Day

November 10th

Today is World Science Day, a day for people across the globe to appreciate the important role science plays in society, and to bring awareness to emerging scientific issues.

Question

On World Food Day, a local food bank distributed food packages to families in need. Each food package contains 5 cans of vegetables, 3 cans of soup, and 2 bags of rice. If they prepared 50 packages, how many cans of vegetables did they distribute? Cans of soup? Bags of rice?

Discuss with a friend how you would figure out how much of each item was in 25 packages.

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THIRD SPACE LEARNING

Veterans' Day

November 11th

Today, we commemorate the military veterans of the United States Armed Forces for the sacrifices they have made for our country. This holiday coincides with other holidays around the globe that mark the end of World War I.

Question

In honor of Veterans' Day, we remember the end of World War I at the 11th hour of the 11th day of the 11th month.
Write out the multiples of 11 starting at 121 and stopping at 198.

Discuss with a friend any patterns you notice. If you keep going, do you notice the same pattern?

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THIRD SPACE LEARNING

World Kindness Day

November 13th

Today is World Kindness Day, a day that is acknowledged throughout the world to spread kindness to all those around us and in our community.

Question

If you showed 5 people a little kindness, and those 5 people showed 5 people kindness each, how many people would have received kindness?

What if each one of those people showed kindness to 5 people?

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THIRD SPACE LEARNING

Thanksgiving

Fourth Thursday of November

Happy Thanksgiving! Thanksgiving is a holiday celebrated by many Americans to contemplate all the things they have to be thankful for. Many celebrate with a feast of turkey, mashed potatoes, stuffing, squash, cranberry sauce, pumpkin pie, and more!

Question

A family is preparing their turkey for their Thanksgiving feast. The turkey they are making weighs 12 pounds. According the cooking instructions, the turkey should be cooked at 325°F for 15 minutes per pound.

How many hours will it take to cook the Thanksgiving turkey?

Discuss with a friend to figure out how many hours it takes to cook the turkey.

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THIRD SPACE LEARNING

Rosa Parks Day

December 1st

Today is a day we commemorate Rosa Parks, a major civil rights leader in our nation's history, who is famous for refusing to give up her seat on the bus and was arrested for doing so. She was found guilty by the court, leading to the Montgomery Bus Boycott. December 1st, 1955 was the day of her arrest.

Question

In Montgomery, Alabama during the time of Rosa Parks, the bus fare was 10 cents. Rosa Parks took the bus to and from work every weekday.

If she worked 5 days a week, how much money would she spend on bus fares in a month with 4 work weeks?

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Hanukkah

December 4th 2026 to December 12th 2026

Happy Hanukkah! Today is the start of the Jewish holiday, Hanukkah, that lasts for 8 days which vary every year. The word “Hanukkah” means “dedication” in Hebrew and celebrates the rededication of the Temple of Jerusalem after it was retaken by the Maccabees.

Question

During Hanukkah, a family lights a menorah each night. On the first night, they light one candle, on the second night they light two, and so on until the eighth night when they light eight candles. How many candles will the family have lit in total by the end of Hanukkah? (Hint: More than eight!)

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Christmas

December 25th

Merry Christmas! Christmas is a Christian holiday to celebrate the birth of Jesus. Many around the world celebrate this holiday gathering with family and friends, exchanging gifts and eating a large feast.

Question

Lisa has a budget of $200 for buying Christmas gifts for her family and friends. She wants to buy gifts for her two parents, two siblings, and four friends. If she plans to spend an equal amount of money on each gift, how much can she spend on each gift, and how much will she have left over from her budget?

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Themed Fall Term - Answers

Day	Question	Answer
Labor Day	If you work a job for 40 hours in a week, how much would you make if you earn $9 per hour? $10 per hour? $18 per hour? Discuss with a friend how you would figure out how much you would make at each of these rates.	$9/hour = $360, $10/hour = $400, $18/hour = $720
Indigenous Peoples' Day / Columbus Day	In honor of Indigenous Peoples' day, students decided to make dream catchers. They had 100 feet of yarn, and each dream catcher requires 2 feet. How many dream catchers can the students make? A larger dream catcher requires 4 feet. How many large dream catchers can be made with 100 feet of yarn? Discuss with a friend different combinations of small and large dream catchers using all 100 feet of yarn.	# of small dream catchers: 50 # of large dream catchers: 25 Some possible combinations: 20 large and 10 small; 15 large and 20 small; 10 large and 30 small (some combinations may not be listed)
World Food Day	On World Food Day, a local food bank distributed food packages to families in need. Each food package contains 5 cans of vegetables, 3 cans of soup, and 2 bags of rice. If they prepared 50 packages, how many cans of vegetables did they distribute? Cans of soup? Bags of rice? Discuss with a friend how you would figure out how much of each item were in 25 packages.	50 packages: 250 cans of vegetables, 150 cans of soup, 100 bags of rice 25 packages: 125 cans of vegetables, 75 cans of soup, 50 bags of rice

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Day	Question	Answer
Halloween	For a Halloween party, each guest is supposed to receive 3 pieces of candy. The candy bags at the store come in packs of 24. If there are 32 guests at the party, how many bags of candy are needed? Discuss with a friend how you would figure out how many bags were needed if there were 48 pieces of candy in each pack.	If there were 24 pieces in a pack, you would need 4 bags. If there were 48 pieces in a pack, you would need 2 bags.
Diwali	A family is decorating their home for Diwali. They have a string of fairy lights with a total length of 30 meters. They want to hang lanterns on the string, and each lantern requires 2 meters of space. If they want to space the lanterns equally along the entire string, how many lanterns can they hang up? What if there were 90 meters of fairy lights? Discuss with a friend how you would solve this problem.	For 30 meters of fairy lights: 15 lanterns For 90 meters of fairy lights: 45 lanterns
World Science Day	For World Science Day, a school organized a science fair. The fair had three sections: Physics, Biology, and Chemistry. There were 35 students who participated in the fair, and each student could choose to present their project in one of the three sections. Twice as many students who chose Physics chose Biology, and half of those who chose Physics, chose Chemistry. If 5 students chose Chemistry, how many chose Physics, and how many chose Biology? Discuss with a friend how you would solve this problem.	10 chose Physics and 20 chose Biology

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Day	Question	Answer
Veterans' Day	In honor of Veterans' Day, we remember the end of World War I at the 11th hour of the 11th day of the 11th month. Write out the multiples of 11 starting at 121 and stopping at 198. Discuss with a friend any patterns you notice. If you keep going, do you notice the same pattern?	Multiples of 11: 121, 132, 143, 154, 165, 176, 187, 198 Patterns: If you add the hundreds digit and the ones digit, it equals the tens digit; the tens are always one greater than the ones. If you keep going: 209, 220, 231, 242, 253, 264... The pattern of adding the hundreds digit and the ones digit to get the tens digit is still true past 220; now the tens are always 2 greater than the ones after 209
World Kindness Day	If you showed 5 people a little kindness, and those 5 people showed 5 people kindness each, how many people would have received kindness? What if each one of those people showed kindness to 5 people?	First wave of kindness: 5 people Second wave: 5 x 5 = 25 people Total: 5 + 25 = 30 people Third wave: 25 x 5 = 125 people Total: 5 + 25 + 125 = 155 people
Thanksgiving	A family is preparing their turkey for their Thanksgiving feast. The turkey they are making weighs 12 pounds. According to the cooking instructions, the turkey should be cooked at 325°F for 15 minutes per pound. How many hours will it take to cook the Thanksgiving turkey? Discuss with a friend to figure out how many hours it takes to cook the turkey.	3 hours
Rosa Parks Day	In Montgomery, Alabama during the time of Rosa Parks, the bus fare was 10 cents. Rosa Parks took the bus to and from work every weekday. If she worked 5 days a week, how much money would she spend on bus fares in a month with 4 work weeks?	She would spend $4 dollars on bus fares

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Day	Question	Answer
Hanukkah	During Hanukkah, a family lights a menorah each night. On the first night, they light one candle, on the second night they light two, and so on until the eighth night when they light eight candles. How many candles will the family have lit in total by the end of Hanukkah? (Hint: More than eight!)	36 candles
Christmas	Lisa has a budget of $200 for buying Christmas gifts for her family and friends. She wants to buy gifts for her two parents, two siblings, and four friends. If she plans to spend an equal amount of money on each gift, how much can she spend on each gift, and how much will she have left over from her budget?	$25 each, none left over

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Michelle Craig, Instructional Coach,
Sherwood Forest Elementary, Washington

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