THIRD SPACE LEARNING

Themed Math Problems

Set 1

September - December

5th 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 42 hours in a week, how much would you make if you earn $12 per hour? $15 per hour? $24 per hour?
Discuss with a friend how you would figure out how much you would make at each of these rates.

© Third Space Learning 2023. You may photocopy this page.

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 3 feet. How many dream catchers can the students make? How much yarn would be left over?

A larger dream catcher requires 6 feet. How many large dream catchers can be made with 100 feet of yarn? How much yarn would be left over? Discuss with a friend different combinations of small and large dream catchers using 100 feet of yarn.

© Third Space Learning 2023. You may photocopy this page.

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 12 cans of vegetables, 11 cans of soup, and 10 bags of rice. If they prepared 75 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 150 packages.

© Third Space Learning 2023. You may photocopy this page.

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 4 pieces of candy. The candy bags at the store come in packs of 108. If there are 50 guests at the party, how many bags of candy are needed? Will there be candy left over?
Discuss with a friend how you would figure out how many bags were needed if there were 54 pieces of candy in each pack.

© Third Space Learning 2023. You may photocopy this page.

THIRD SPACE LEARNING

Diwali

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 10 meters. They want to hang lanterns on the string, and each lantern requires 20 centimeters of space. If they want to space the lanterns equally along the entire string, how many lanterns can they hang up?

© Third Space Learning 2023. You may photocopy this page.

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

For World Science Day, a school organized a science fair. The fair had three sections: Physics, Biology, and Chemistry. There were 50 students who participated in the fair, and each student could choose to present their project in one of the three sections. Half of the number of students who chose Biology chose Chemistry. The same number of students chose Physics as Biology.

Discuss with a friend to figure out how many students were in each section.

© Third Space Learning 2023. You may photocopy this page.

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.
Any 4-digit number that is also a palindrome (a number that stays the same if its digits are reversed; e.g. 1221) is divisible by 11. Write 3 palindromic numbers and divide them by 11 to prove this.

© Third Space Learning 2023. You may photocopy this page.

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

© Third Space Learning 2023. You may photocopy this page.

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 15 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.

© Third Space Learning 2023. You may photocopy this page.

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 12 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?

© Third Space Learning 2023. You may photocopy this page.

THIRD SPACE LEARNING

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

In the game of dreidel, there are four sides to the dreidel, each marked with a Hebrew letter: Nun, Gimel, Hey, and Shin. When spun, there is an equal chance of landing on each side.

If you play dreidel and spin it 20 times, what is the expected number of times you will land on the letter “Gimel,” which means you get to take half of the pot?

Discuss with a friend.

© Third Space Learning 2023. You may photocopy this page.

THIRD SPACE LEARNING

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 $250 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?

© Third Space Learning 2023. You may photocopy this page.

Themed Fall Term - Answers

Day	Question	Answer
Labor Day	If you work a job for 42 hours in a week, how much would you make if you earn $12 per hour? $15 per hour? $24 per hour? Discuss with a friend how you would figure out how much you would make at each of these rates.	$12/hour = $504; $15/hour = $630; $24/hour = $1,008
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 3 feet. How many dream catchers can the students make? How much yarn would be left over? A larger dream catcher requires 6 feet. How many large dream catchers can be made with 100 feet of yarn? How much yarn would be left over? Discuss with a friend different combinations of small and large dream catchers using 100 feet of yarn.	They would be able to make 33 small dream catchers. 1 foot of yarn would be left over. They would be able to make 16 large dream catchers. 4 feet of yarn would be left over. Possible combinations: 10 large, 13 small, 1 foot leftover; 12 large, 9 small, 1 foot leftover; etc (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 12 cans of vegetables, 11 cans of soup, and 10 bags of rice. If they prepared 75 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 150 packages.	For 75 packages: 900 cans of vegetables, 825 cans of soup, 750 bags of rice For 150 packages: 1,800 cans of vegetables, 1,650 cans of soup, 1,500 bags of rice

© Third Space Learning 2023. You may photocopy this page.

Day	Question	Answer
Halloween	For a Halloween party, each guest is supposed to receive 4 pieces of candy. The candy bags at the store come in packs of 108. If there are 50 guests at the party, how many bags of candy are needed? Will there be candy left over? Discuss with a friend how you would figure out how many bags were needed if there were 54 pieces of candy in each pack.	For 108 pieces of candy in a pack, you would need 2 bags and there would be 16 pieces left over. For 54 pieces of candy in a pack, you would need 4 bags and there would be 16 pieces left over.
Diwali	A family is decorating their home for Diwali. They have a string of fairy lights with a total length of 10 meters. They want to hang lanterns on the string, and each lantern requires 20 centimeters of space. If they want to space the lanterns equally along the entire string, how many lanterns can they hang up?	50 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 50 students who participated in the fair, and each student could choose to present their project in one of the three sections. Half of the number of students who chose Biology chose Chemistry. The same number of students chose Physics as Biology. Discuss with a friend to figure out how many students were in each section.	20 chose Biology, 20 chose Physics, and 10 chose Chemistry

© Third Space Learning 2023. You may photocopy this page.

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. Any 4-digit number that is also a palindrome (a number that stays the same if its digits are reversed; e.g. 1221) is divisible by 11. Write 3 palindromic numbers and divide them by 11 to prove this.	Answers will vary. Students can choose to divide numbers like 1221, 2332, 1331, 5445 by 11
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? 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 Fourth wave: 125 x 5 = 625 people Total: 5 + 25 + 125 + 625 = 780 people
Thanksgiving	A family is preparing their turkey for their Thanksgiving feast. The turkey they are making weighs 15 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.	3 hours 45 minutes
Rosa Parks Day	In Montgomery, Alabama during the time of Rosa Parks, the bus fare was 12 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?	$4.80

© Third Space Learning 2023. You may photocopy this page.

Day	Question	Answer
Hanukkah	In the game of dreidel, there are four sides to the dreidel, each marked with a Hebrew letter: Nun, Gimel, Hey, and Shin. When spun, there is an equal chance of landing on each side. If you play dreidel and spin it 20 times, what is the expected number of times you will land on the letter "Gimel," which means you get to take half of the pot? Discuss with a friend.	5 times
Christmas	Lisa has a budget of $250 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?	She can spend $31.25 on each gift with nothing leftover.

© **Third Space Learning 2023.** You may photocopy this page.

Do you have a group of students who need a boost in math?

Each student could receive personalized lessons every week from our specialist one-on-one AI math tutor, Skye.

- Differentiated instruction for each student
- Aligned to your state's standards
- Scaffolded learning to close gaps

"We just had our first session and it went great! The kids really liked it and felt like they were learning! One even said he finally felt like math was making sense."

Michelle Craig, Instructional Coach,
Sherwood Forest Elementary, Washington

Speak to us

thirdspacelearning.com/us/

(929) 298-4593

hello@thirdspacelearning.com

THIRD SPACE
LEARNING