



ACTIVITY GUIDE

Skip Counting by 9s Mat

The Skip Counting by 9s mat was designed to help students learn the multiples of nine and practice multiplying and dividing by nine.

Skip Count by 9s (Grade 3)

Have a student start on zero. Then, have them point out the pattern that the gold boxes with the feet follow. Explain to them that these boxes are showing the multiples of nine.

Whisper Loud: To begin learning multiples of nine, start with the whisper loud technique to have students jump down the mat. Have students follow this pattern: Jump on the one. Whisper, “one.” Jump on the two. Whisper, “two.” Jump on the three. Whisper, “three.” Jump on the four. Whisper, “four.” Jump on the five. Whisper, “five.” Jump on the six. Whisper, “six.” Jump on the seven. Whisper, “seven.” Jump on the eight. Whisper, “eight.” Jump on the nine. Shout, “NINE!” Continue with this pattern down the mat to ninety.

Skip Counting: Once they are more comfortable with the multiples of nine, you can have students skip count down the mat, only jumping on the gold boxes. Make sure they are saying the number confidently and correctly when they land on each multiple. If their jumps get ahead of the numbers, have them start again.

Multiplication (Grade 3)

Give a student a multiplication by 9s problem (verbally, flashcard, worksheet, etc.).

Example: 9×6

The student will begin on 0. They will jump forward 6 times, only landing on the multiples of 9. When they land on the sixth number, 54, they will say, “ $9 \times 6 = 54$.”

You can also have students practice each multiplication fact as they hop down the mat:

Jump on 9. Say, “ $9 \times 1 = 9$.” Jump on 18. Say, “ $9 \times 2 = 18$,” etc.

Division (Grade 3)

Give a student a division by 9s problem (verbally, flashcard, worksheet, etc.).

Example: $45 \div 9$

The student will begin on the first number of the problem, 45. Then, they will jump back to zero on the multiples of 9. How many jumps did it take to get back to zero? 5! Therefore, 45 divided by 9 is 5.

Clipboard Math (Grade 3)

For enjoyable math practice, clip a multiplication and/or division by 9s worksheet on a clipboard.

Have your students figure out the answers to the math problems by using the mat.

Bean Bag Baseball Game (Grades 3-4)

Divide your class into teams (the number of teams and the number of students on each team will depend on how many students you have). Place a bucket/basket at the end of the floor mat after 90.

Have one team line up in a single file line behind zero. The other team will wait off to the side of the mat until it is their turn "at bat." The goal of the bean bag game is to get the most bean bags into the bucket before all of the rounds/innings are over. You can determine how many rounds you play.

Give the first player a multiplication by 9s question. Have them hop to their answer and make sure they are correct. If the answer is correct, they will try to toss their bean bag into the bucket at the end of the floor mat. If they are incorrect, they get a 'strike' and do not get to toss their bean bag. Repeat with the next student in line. You can decide how many 'strikes' each team gets before switching to the next team.

Division with Remainders (Grades 4-5)

Give students a dividend that will have a remainder when divided by nine. Have them find and stand on the dividend on the mat. Have them jump and count the number of spaces it takes to reach the next lowest multiple of nine. The number of spaces is the remainder number. Have them hold it up on their fingers. Then, have them follow the procedure for dividing while keeping the initial "remainder" number on their fingers.

Example: Give them the number 56. They will find and stand on 56 and take two jumps to land on 54. Holding 2 on their fingers, they then jump the multiples to zero, counting how many jumps it takes out loud. When they get to zero, they recite, "Fifty-six divided by nine is six remainder two."

Least Common Multiple (Grade 6)

Requires two different skip counting mats.

Line up two skip counting mats. Tell students you will be comparing these two factors and finding least common multiples. Have one student on each mat. Instruct one student to hop on the multiples going up their mat, shouting out the multiples as they hop. Then, have the second student do the same on the second mat. When the class hears the second student call out a duplicate number, they yell to the second student to stop. Check to see if they found the least common multiple (LCM) or just a common multiple.

Example: Find the LCM of 8 and 9. Line up the Skip Counting by 8s and 9s mats side by side. One student jumps 8, 16, 24, 32, 40, 48, 56, 64, 72, 80, up the mat. Then, the other jumps 9, 18, 27, 36, 45, 54, 63, 72...the class yells, "STOP!"

Skip Counting by 9s Worksheet 1

$7 \times 6 = \underline{\quad}$

$7 \times 2 = \underline{\quad}$

$7 \times 8 = \underline{\quad}$

$7 \times 5 = \underline{\quad}$

$7 \times 7 = \underline{\quad}$

$7 \times 1 = \underline{\quad}$

$7 \times 4 = \underline{\quad}$

$7 \times 10 = \underline{\quad}$

$7 \times 3 = \underline{\quad}$

$7 \times 9 = \underline{\quad}$

Skip Counting by 9s Worksheet 2

$9 \times 4 = \underline{\quad}$

$9 \times 10 = \underline{\quad}$

$9 \times 2 = \underline{\quad}$

$6 \times 9 = \underline{\quad}$

$9 \times 9 = \underline{\quad}$

$9 + 9 + 9 + 9 = \underline{\quad}$

$1 \times 9 = \underline{\quad}$

$5 \times 9 = \underline{\quad}$

$6 \times 9 = \underline{\quad}$

$9 \times 9 = \underline{\quad}$

$9 \times 6 = \underline{\quad}$

$8 \times 9 = \underline{\quad}$

$9 \times 4 = \underline{\quad}$

$9 \times 2 = \underline{\quad}$

$9 + 9 + 9 = \underline{\quad}$

$9 \times 5 = \underline{\quad}$

$7 \times 9 = \underline{\quad}$

$9 \times 9 = \underline{\quad}$

Skip Counting by 9s Worksheet 3

$9 \times 5 = \underline{\quad}$

$7 \times 9 = \underline{\quad}$

$9 \times 2 = \underline{\quad}$

$9 \times 6 = \underline{\quad}$

$9 \times 10 = \underline{\quad}$

$9 \times 9 = \underline{\quad}$

$5 \times 9 = \underline{\quad}$

$9 + 9 + 9 + 9 = \underline{\quad}$

$3 \times 9 = \underline{\quad}$

$9 \times 4 = \underline{\quad}$

$9 + 9 + 9 = \underline{\quad}$

$2 \times 9 = \underline{\quad}$

$9 \times 7 = \underline{\quad}$

$8 \times 9 = \underline{\quad}$

$9 \times 1 = \underline{\quad}$

$3 \times 9 = \underline{\quad}$

$8 \times 9 = \underline{\quad}$

$9 \times 9 = \underline{\quad}$

$6 \times 9 = \underline{\quad}$

$9 \times 2 = \underline{\quad}$

Skip Counting by 9s Worksheet 4

$9 \times 2 = \underline{\quad}$

$8 \times 9 = \underline{\quad}$

$9 \times 10 = \underline{\quad}$

$9 \times 9 = \underline{\quad}$

$9 \times 5 = \underline{\quad}$

$9 \times 3 = \underline{\quad}$

$9 \times 1 = \underline{\quad}$

$6 \times 9 = \underline{\quad}$

$9 \times 2 = \underline{\quad}$

$9 \times 10 = \underline{\quad}$

$9 \times 7 = \underline{\quad}$

$9 \times 5 = \underline{\quad}$

$3 \times 9 = \underline{\quad}$

$4 \times 9 = \underline{\quad}$

$9 \times 0 = \underline{\quad}$

$8 \times 9 = \underline{\quad}$

$9 \times 6 = \underline{\quad}$

$9 \times 1 = \underline{\quad}$

$7 \times 9 = \underline{\quad}$

$2 \times 9 = \underline{\quad}$

Skip Counting by 9s Worksheet 5

$9 \times 5 = \underline{\quad}$

$7 \times 9 = \underline{\quad}$

$8 \times 9 = \underline{\quad}$

$4 \times 9 = \underline{\quad}$

$9 \times 9 = \underline{\quad}$

$9 \times 8 = \underline{\quad}$

$2 \times 9 = \underline{\quad}$

$11 \times 9 = \underline{\quad}$

$9 \times 2 = \underline{\quad}$

$9 + 9 + 9 = \underline{\quad}$

$9 \times 6 = \underline{\quad}$

$6 \times 9 = \underline{\quad}$

$8 \times 9 = \underline{\quad}$

$8 \times 9 = \underline{\quad}$

$9 + 9 + 9 + 9 = \underline{\quad}$

$3 \times 9 = \underline{\quad}$

$9 \times 10 = \underline{\quad}$

$9 \times 7 = \underline{\quad}$

$6 \times 9 = \underline{\quad}$

$2 \times 9 = \underline{\quad}$

$9 \times 5 = \underline{\quad}$

$9 \times 1 = \underline{\quad}$

Skip Counting by 9s Worksheet 6

$6 \times 9 = \underline{\quad}$

$9 \times 9 = \underline{\quad}$

$5 \times 9 = \underline{\quad}$

$9 \times 5 = \underline{\quad}$

$6 \times 9 = \underline{\quad}$

$9 \times 4 = \underline{\quad}$

$4 \times 9 = \underline{\quad}$

$9 \times 10 = \underline{\quad}$

$1 \times 9 = \underline{\quad}$

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$6 \times 9 = \underline{\quad}$

$9 \times 4 = \underline{\quad}$

$9 \times 9 = \underline{\quad}$

$9 \times 0 = \underline{\quad}$

$3 \times 9 = \underline{\quad}$

$9 \times 4 = \underline{\quad}$

Skip Counting by 9s Worksheet 7

$2 \times 9 = \underline{\quad}$

$10 \times 9 = \underline{\quad}$

$9 \times 2 = \underline{\quad}$

$11 \times 9 = \underline{\quad}$

$9 \times 9 = \underline{\quad}$

$8 \times 9 = \underline{\quad}$

$4 \times 9 = \underline{\quad}$

$1 \times 9 = \underline{\quad}$

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$7 \times 9 = \underline{\quad}$

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$9 \times 7 = \underline{\quad}$

$9 \times 10 = \underline{\quad}$

$5 \times 9 = \underline{\quad}$

$9 \times 7 = \underline{\quad}$

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$9 \times 5 = \underline{\quad}$

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$9 \times 1 = \underline{\quad}$

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$4 \times 9 = \underline{\quad}$

$9 \times 1 = \underline{\quad}$

$9 \times 9 = \underline{\quad}$

$9 \times 5 = \underline{\quad}$

Skip Counting by 9s Worksheet 8

$9 \times 9 = \underline{\quad}$

$9 \times 11 = \underline{\quad}$

$9 \times 6 = \underline{\quad}$

$9 \times 3 = \underline{\quad}$

$6 \times 9 = \underline{\quad}$

$9 \times 5 = \underline{\quad}$

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$9 \times 4 = \underline{\quad}$

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$9 \times 1 = \underline{\quad}$

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Skip Counting by 9s Worksheet 9

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Dividing by 9s

$63 \div 9 = \underline{\quad}$

$72 \div 9 = \underline{\quad}$

$90 \div 9 = \underline{\quad}$

$9 \div 9 = \underline{\quad}$

$36 \div 9 = \underline{\quad}$

$45 \div 9 = \underline{\quad}$

$54 \div 9 = \underline{\quad}$

$81 \div 9 = \underline{\quad}$

$27 \div 9 = \underline{\quad}$

$18 \div 9 = \underline{\quad}$