



**THIRD SPACE
LEARNING**

Math Intervention Pack

Teacher Guide: How to use the
Third Space Learning math
intervention pack

Whole School

About the Intervention Pack

Our Math Intervention Packs contain sample lessons that our tutors use with students in our own one to one intervention sessions. At Third Space Learning, we have over 200 lessons for students in elementary and middle school. These lessons have been developed by math curriculum experts and specialists.

To give you a taste of what is available in our intervention, and to help students in your school, we have taken a sample of our favorite lessons and brought them into a single pack for you.

Included with the sample lessons are a selection of the notes our tutors use when teaching each lesson.

The tutor notes for individual slides include:

- suggestion of how to support students if they're stuck
- questions to ask (with sample answers, where appropriate) or modeling prompts
- answers to all the questions on a slide
- common errors or misconceptions students may encounter throughout the lesson

In addition, every lesson starts with key information for the tutor including:

- the common core standard related to the lesson
- key mathematical ideas
- key mathematical terminology
- sentence stems

About the online one to one tutoring

Third Space Learning is a specialist provider of math tutoring to schools. We're on a mission to help teachers like you shape your students into confident, able mathematicians.

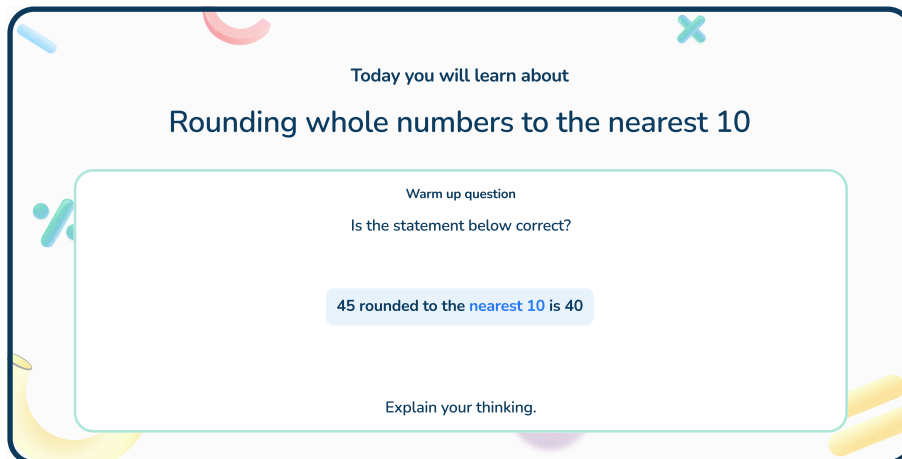
We do this by giving students personalized one to one math tutoring targeted to their individual needs. Through continual assessment we can adapt the teaching as students progress. Our approach is designed to ease the pressure on teachers and budgets by taking up to 20 students at one time for affordable one to one lessons. All you need to provide is the laptop/PC.

Find out more at <https://thirdspacelearning.com/us/>

How to use the resources

Title Slide

The title slide aims to activate prior knowledge necessary for the lesson. Use this slide to check students have the base knowledge needed to complete the given lesson. Students should be encouraged to initially attempt the question presented independently.



Today you will learn about

Rounding whole numbers to the nearest 10

Warm up question

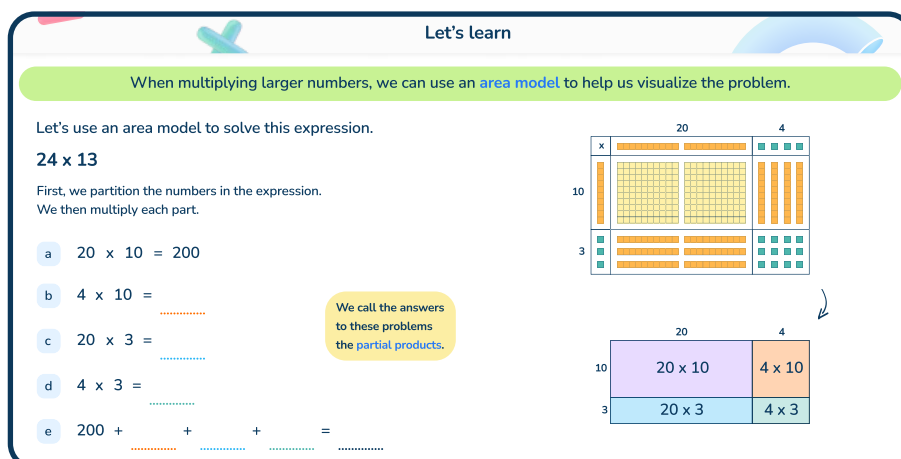
Is the statement below correct?

45 rounded to the nearest 10 is 40

Explain your thinking.

Let's Learn

The let's learn slide introduces the key concept for this lesson. The tutor should introduce the concept and work with the student to explore the concept together, usually using diagrams to support understanding.



Let's learn

When multiplying larger numbers, we can use an **area model** to help us visualize the problem.

Let's use an area model to solve this expression.

24 x 13

First, we partition the numbers in the expression.
We then multiply each part.

a $20 \times 10 = 200$

b $4 \times 10 =$

c $20 \times 3 =$

d $4 \times 3 =$

e $200 +$ $+$ $+$ $=$

We call the answers to these problems the **partial products**.

Area model diagram showing the multiplication of 24 by 13. The top part shows a grid partitioned into four sections: 20x10, 4x10, 20x3, and 4x3. The bottom part shows the same grid with the partial products labeled: 20 x 10, 4 x 10, 20 x 3, and 4 x 3.

Follow Me + Your Turn

The follow me slide takes a deeper look at the concept. This part of the lesson is worked through by the tutor. The tutor should explain their thinking out loud to model the process to the student.


The your turn section is an opportunity for the student to then solve a very similar question using the method the tutor has modeled. This slide is the student's opportunity to work through the given question. Students should be encouraged to explain their thinking out loud to ensure they have understood the concept and to develop their reasoning skills.


Follow me

Let's look at what happens if the tens do not divide easily by the divisor.

$81 \div 3$

Partition 81 into two parts that can be divided by 3 easily.

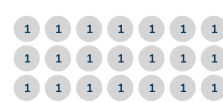

 $81 = 60 + 21$



Exchange the 2 tens for 20 ones

a Divide 6 tens by 3 $60 \div 3 = \dots\dots\dots$

b Divide 21 by 3 $21 \div 3 = \dots\dots\dots$




c Add the divided parts, so $81 \div 3 = \dots\dots\dots$


Your turn

Solve this in a similar way.

$92 \div 4$

Partition 92 into two parts that can be divided by 4 easily.


 $92 = \dots + \dots$



a Divide the first part by 4 $\dots \div 4 = \dots\dots\dots$

b Divide the remaining part by 4 $\dots \div 4 = \dots\dots\dots$

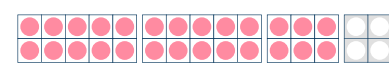
c Add the divided parts, so $92 \div 4 = \dots\dots\dots$

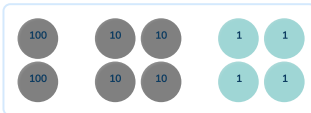
You Do

The you do slide encourages students to work independently through a range of carefully sequenced questions that build in complexity. Tutors can offer support but students should initially be encouraged to attempt these questions independently.

You do

Round these numbers to the nearest 10


a 

b 

c 899

Use the number line if it helps.

d 104



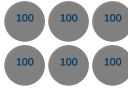
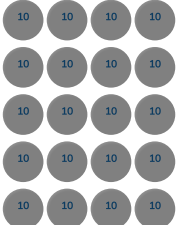

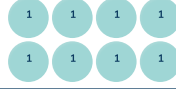
Go Further

The go further slide allows students to apply their understanding to a problem solving and reasoning question. This question is often a 'challenge' or 'extension' grade-level question over the standard/ concept taught within the lesson.

Go further

Libby has started solving an equation but hasn't finished it.

What does she need to add to complete the equation?

| x | 30 | 4 |
|----|---|--|
| 50 |  |  |
| 2 |  |  |




Support for Slide(s)

The support slide is used to support students during the lesson. These usually return to prerequisite knowledge needed and make greater use of the concrete, pictorial, abstract approach. In the tutor notes, there will be guidance as to when to use the support slide.

Support

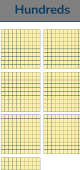


Let's look at these equations using base ten blocks.

| | | |
|---|---|---|
| | 8 | 4 |
| - | 5 | 7 |
| | | |

| Tens | Ones |
|---|---|
|  |  |
|  | |

We need to **exchange** one ten for ten ones.

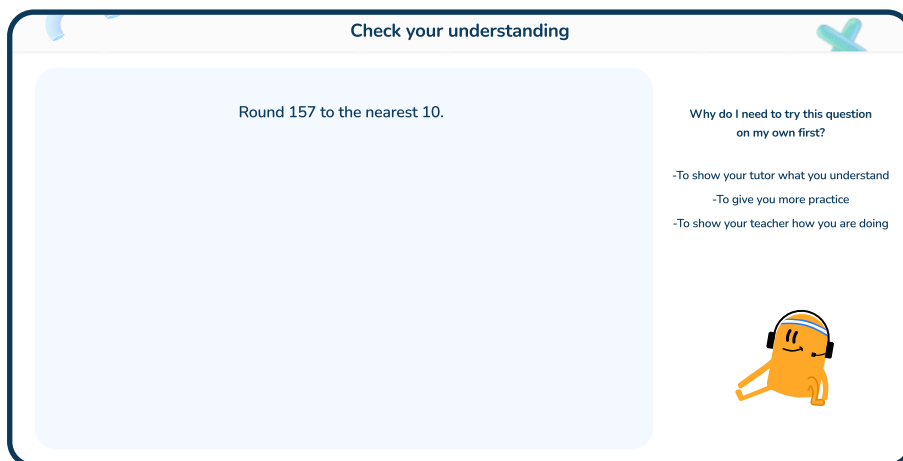
| | | | |
|---|---|---|---|
| | 7 | 0 | 8 |
| - | 3 | 5 | 6 |
| | | | |

| Hundreds | Tens | Ones |
|---|------|---|
|  | |  |
| | |  |

We need to **exchange** one hundred for ten tens.

Check Your Understanding

This is an open-ended or multiple choice assessment question that encourages discussion between tutor and student, enabling the tutor to assess the student's knowledge and whether or not they have mastered the concept within the lesson.



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 math tutors.




- ✓ 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/
-  +1 929-298-4593
-  hello@thirdspacelearning.com



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