



2-Digit by 1-Digit Division

Purpose This introductory activity provides a further scaffolded approach to 2-digit by 1-digit division in order to connect models of division to abstract algorithms. Students will start with partially completed models and algorithms. As they fill in the blanks and solve, they will further connect the concrete, pictorial, and abstract models for division.

- | | | |
|---|---|---------------------------------------|
| <input checked="" type="checkbox"/> Teacher-facilitated w/ Small Student Groups | <input checked="" type="checkbox"/> Tutoring/Intervention | <input type="checkbox"/> Journal |
| <input checked="" type="checkbox"/> Small Group | <input type="checkbox"/> Centers | <input type="checkbox"/> Anchor chart |

Setting Up For Instruction

- Make 1 copy of **Group It 2** (PG. 24–25) for every pair of students.

How-To Guide

1. Place students in pairs and hand out materials.
2. Have students work together to solve each problem by filling in the blanks.

Thought Extenders

- What number is being divided? What is the divisor?
- How many groups is the dividend being divided into?
- How can the dividend be written in expanded form?
- How can you represent this number in base-ten blocks?
- What do you do when you need units and you have longs?
How do you break a long into units?
- How can you make a rectangle that is the size of the dividend and has the divisor as one of the sides?
- Where do you find the quotient in the rectangle?
- How can you draw this on grid paper?
- How can you sketch this?
- How can you use numbers to record your work?

Different Kinds of Division

There are 2 kinds of division problems.

In Partitive Division problems, the student is given the number of groups and has to find out how many there are in each group. In the following example, the student is given the **number of groups**, 2, and is looking for the number of cars **in each group**.

Ex. Jeremiah has 24 model cars. Half of the cars are red and half of them are blue.
How many cars are red?

In Measurement Division, the student is given the number in each group and has to find out how many groups there are. In the following example, the student is given the **number in each group**, 4, and looking for the **number of groups**, the colors.

Ex. Jeremiah has 24 model cars. He has grouped them by color. There are 4 cars in each color.
How many different colors of cars does he have?

Although your students don't need to know the names of the types of division, they do need experience with both measurement and partitive division.

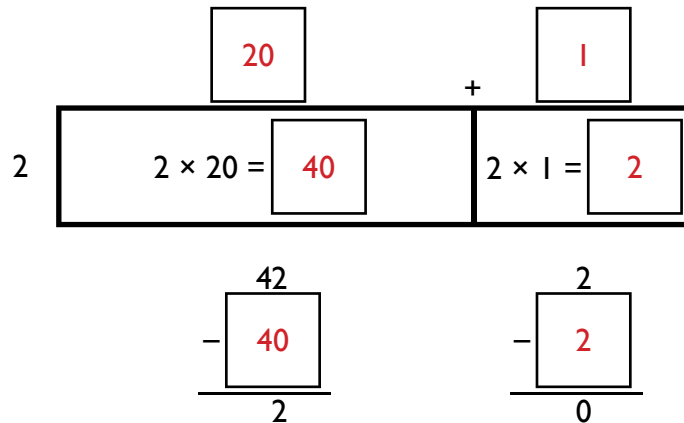


GROUP IT 2 ANSWER KEY (PG. 1 OF 2)

Directions: Fill in the blanks to solve each problem using an area model and the standard algorithm.

- 1 The Cielo Vista P.E. teacher put her 42 students in pairs so they could run a race. How many pairs of students could she make?

Fill in the blanks to solve using an area model.



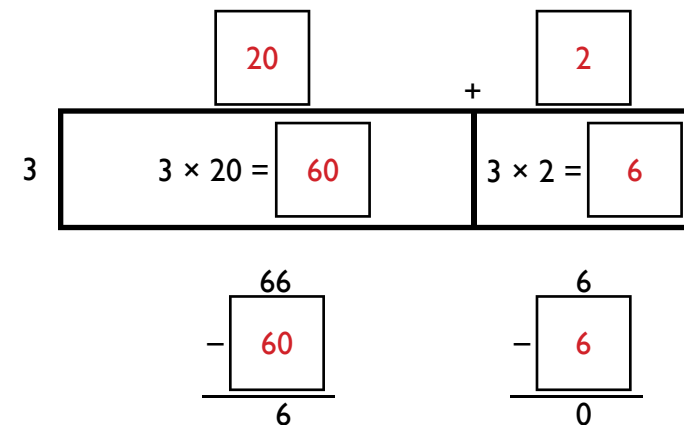
Fill in the blanks to solve using the standard algorithm.

$$\begin{array}{r} 21 \\ 2 \overline{) 42} \\ - 4 \\ \hline 2 \\ - 2 \\ \hline 0 \end{array}$$

Solution: 21 pairs

- 2 66 students at Purple Sage Elementary went to the Blanton Museum. The teacher divided the students into 3 equal groups and sent them to different parts of the museum. How many students were in each group?

Fill in the blanks to solve using an area model.



Fill in the blanks to solve using the standard algorithm.

$$\begin{array}{r} 22 \\ 3 \overline{) 66} \\ - 6 \\ \hline 6 \\ - 6 \\ \hline 0 \end{array}$$

Solution: 22 students



GROUP IT 2 ANSWER KEY (PG. 2 OF 2)

- 3 At Lancaster Elementary, 92 students signed up for the spelling bee. The teacher put them in groups of 4 to practice spelling their words. How many groups of 4 were there?

Fill in the blanks to solve using an area model.

$$\begin{array}{r}
 \boxed{20} \\
 + \quad \boxed{3} \\
 \hline
 4 \times \boxed{20} = \boxed{80} \quad 4 \times \boxed{3} = \boxed{12} \\
 \hline
 \begin{array}{r}
 \boxed{92} \\
 - \boxed{80} \\
 \hline
 12
 \end{array}
 \quad
 \begin{array}{r}
 12 \\
 - \boxed{12} \\
 \hline
 0
 \end{array}
 \end{array}$$

Fill in the blanks to solve using the standard algorithm.

$$\begin{array}{r}
 \boxed{23} \\
 4 \overline{) 92} \\
 \underline{- 8} \\
 12 \\
 \underline{- 12} \\
 0
 \end{array}$$

Solution: 23 groups

- 4 At Birdwell Elementary, there are 80 students in 4th grade. The principal wanted to have the same number of students in each of the 5 classes. How many students were put in each class?

Fill in the blanks to solve using an area model.

$$\begin{array}{r}
 \boxed{10} \\
 + \quad \boxed{6} \\
 \hline
 5 \times \boxed{10} = \boxed{50} \quad 5 \times \boxed{6} = \boxed{30} \\
 \hline
 \begin{array}{r}
 \boxed{80} \\
 - \boxed{50} \\
 \hline
 30
 \end{array}
 \quad
 \begin{array}{r}
 \boxed{30} \\
 - \boxed{30} \\
 \hline
 0
 \end{array}
 \end{array}$$

Fill in the blanks to solve using the standard algorithm.

$$\begin{array}{r}
 \boxed{16} \\
 5 \overline{) 80} \\
 \underline{- 5} \\
 30 \\
 \underline{- 30} \\
 0
 \end{array}$$

Solution: 16 students



Directions: Fill in the blanks to solve each problem using an area model and the standard algorithm.

- 1 The Cielo Vista P.E. teacher put her 42 students in pairs so they could run a race. How many pairs of students could she make?

Fill in the blanks to solve using an area model.

| | |
|---|---|
| $\begin{array}{r} \square \\ + \square \\ \hline \end{array}$ | $\begin{array}{r} \square \\ + \square \\ \hline \end{array}$ |
| $2 \times 20 = \square$ | $2 \times 1 = \square$ |
| $\begin{array}{r} 42 \\ - \square \\ \hline 2 \end{array}$ | $\begin{array}{r} 2 \\ - \square \\ \hline 0 \end{array}$ |

Fill in the blanks to solve using the standard algorithm.

$$\begin{array}{r} \square \\ 2 \overline{) 42} \\ - \square \\ \hline 2 \\ - \square \\ \hline 0 \end{array}$$

Solution: _____

- 2 66 students at Purple Sage Elementary went to the Blanton Museum. The teacher divided the students into 3 equal groups and sent them to different parts of the museum. How many students were in each group?

Fill in the blanks to solve using an area model.

| | |
|---|---|
| $\begin{array}{r} \square \\ + \square \\ \hline \end{array}$ | $\begin{array}{r} \square \\ + \square \\ \hline \end{array}$ |
| $3 \times 20 = \square$ | $3 \times 2 = \square$ |
| $\begin{array}{r} 66 \\ - \square \\ \hline 6 \end{array}$ | $\begin{array}{r} 6 \\ - \square \\ \hline 0 \end{array}$ |

Fill in the blanks to solve using the standard algorithm.

$$\begin{array}{r} \square \\ 3 \overline{) 66} \\ - \square \\ \hline 6 \\ - \square \\ \hline 0 \end{array}$$

Solution: _____



- 3** At Lancaster Elementary, 92 students signed up for the spelling bee. The teacher put them in groups of 4 to practice spelling their words. How many groups of 4 were there?

Fill in the blanks to solve using an area model.

$$\begin{array}{r}
 \square \\
 + \quad \square \\
 \hline
 4 \times \square = \square \quad 4 \times 3 = \square \\
 \hline
 \begin{array}{r}
 \square \\
 - \square \\
 \hline
 12
 \end{array}
 \quad
 \begin{array}{r}
 12 \\
 - \square \\
 \hline
 0
 \end{array}
 \end{array}$$

Fill in the blanks to solve using the standard algorithm.

$$\begin{array}{r}
 \square \\
 4 \overline{) 92} \\
 \underline{- \square} \\
 \square \\
 \underline{- \square} \\
 0
 \end{array}$$

Solution: _____

- 4** At Birdwell Elementary, there are 80 students in 4th grade. The principal wanted to have the same number of students in each of the 5 classes. How many students were put in each class?

Fill in the blanks to solve using an area model.

$$\begin{array}{r}
 \square \\
 + \quad \square \\
 \hline
 5 \times \square = \square \quad 5 \times \square = \square \\
 \hline
 \begin{array}{r}
 \square \\
 - \square \\
 \hline
 30
 \end{array}
 \quad
 \begin{array}{r}
 \square \\
 - \square \\
 \hline
 0
 \end{array}
 \end{array}$$

Fill in the blanks to solve using the standard algorithm.

$$\begin{array}{r}
 \square \\
 5 \overline{) 80} \\
 \underline{- \square} \\
 30 \\
 \underline{- \square} \\
 0
 \end{array}$$

Solution: _____