

Multiplying by 4

The three witches in Macbeth who declared, “Double, double, toil and trouble,” had it all wrong. When it comes to multiplying by 4, “double, double” eliminates the trouble. How do you break this good news to students?

Tell students that to multiply any number by 4, simply double the number and then add it to itself. Take 4×7 , for example.

Double the 7 to get 14. Then add $14 + 14$ to get 28. It works like magic!

You can demonstrate this technique visually by writing the following on the board:

$$\begin{array}{r} 3 \\ \times 4 \\ \hline 12 \end{array}$$

$$\begin{array}{r} 3 \\ \times 2 \\ \hline 6 \end{array} \quad \nearrow \quad \begin{array}{r} 6 \\ + 6 \\ \hline 12 \end{array}$$

$$\begin{array}{r} 6 \\ \times 4 \\ \hline 24 \end{array}$$

$$\begin{array}{r} 6 \\ \times 2 \\ \hline 12 \end{array} \quad \nearrow \quad \begin{array}{r} 12 \\ + 12 \\ \hline 24 \end{array}$$

$$\begin{array}{r} 9 \\ \times 4 \\ \hline 36 \end{array}$$

$$\begin{array}{r} 9 \\ \times 2 \\ \hline 18 \end{array} \quad \nearrow \quad \begin{array}{r} 18 \\ + 18 \\ \hline 36 \end{array}$$

Continue working through the fours facts in this manner until you think students have grasped the concept.

Musical Multiples

The 4s (sung to “London Bridge”)

Four, eight, twelve, sixteen, twenty, / twenty-four, twenty-eight.

London Bridge is falling down, / falling down, falling down.

Thirty-two, thirty-six, forty, / forty-four, forty-eight.

London Bridge is falling down, / my fair lady.

Break the Code

Duplicate the puzzle on page 43 for students to work on at home.

(The solution is:
IN THE FOREST.)



Take Home: Encourage students to try activities that feature this icon at home with friends and family!

I've Got You Cornered

If your students went in search of the four corners of the earth, they'd have a hard time finding them. Even Christopher Columbus couldn't do it! But finding four corners on other things isn't as difficult.

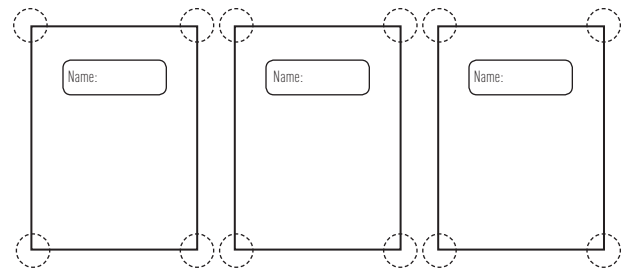
Have students look around the room and identify objects with four corners. How about the door? The floor? A window? A poster? The chalkboard? A book?

Now challenge students to find groups of items having corners—for example, three books or seven posters. Ask, "How many corners do you see in the whole group?"

Three books will give them twelve corners.

Seven posters will give them twenty-eight corners.

For each group of items, have students touch and count the corners they see. Then have them write the appropriate multiplication statement.



$$4 \times 3 = 12$$

A Corner Poem

Challenge students to memorize this poem for the 4s.

If you wish, duplicate this poem, so students can take it home to practice.

A Corner Poem

Four corners, one door:	$4 \times 1 = 4$
Four corners, two slates:	$4 \times 2 = 8$
Four corners, three shelves:	$4 \times 3 = 12$
Four corners, four screens:	$4 \times 4 = 16$
Four corners, five cakes plenty:	$4 \times 5 = 20$
Four corners, six floors:	$4 \times 6 = 24$
Four corners, seven gates:	$4 \times 7 = 28$
Four corners, eight dirty shoes:	$4 \times 8 = 32$
Four corners, nine dirty bricks:	$4 \times 9 = 36$

Name: _____

Break the Code

You're a world-famous detective. You've cracked some of the toughest cases, and here's your latest assignment: Find out where animals who love the number 4 make their homes.

How do you do that?

First, do each of the 11 math problems below, writing your answers in the boxes beneath the problem.

Next, find the letter in the Code Key that matches the answer.

Now, write the letter in the blank beneath the box.

$$\begin{array}{r} 9 \\ \times 4 \\ \hline \square \end{array}$$

$$\begin{array}{r} 4 \\ \times 4 \\ \hline \square \end{array}$$

$$\begin{array}{r} 1 \\ \times 4 \\ \hline \square \end{array}$$

$$\begin{array}{r} 0 \\ \times 4 \\ \hline \square \end{array}$$

$$\begin{array}{r} 8 \\ \times 4 \\ \hline \square \end{array}$$

$$\begin{array}{r} 6 \\ \times 4 \\ \hline \square \end{array}$$

$$\begin{array}{r} 2 \\ \times 4 \\ \hline \square \end{array}$$

$$\begin{array}{r} 5 \\ \times 4 \\ \hline \square \end{array}$$

$$\begin{array}{r} 8 \\ \times 4 \\ \hline \square \end{array}$$

$$\begin{array}{r} 3 \\ \times 4 \\ \hline \square \end{array}$$

$$\begin{array}{r} 7 \\ \times 4 \\ \hline \square \end{array}$$

Code Key

0 = H 8 = O 16 = N 24 = F 32 = E

4 = T 12 = S 20 = R 28 = T 36 = I