

AIM: 1-12 I will be able to divide a decimal by a decimal!

Name _____

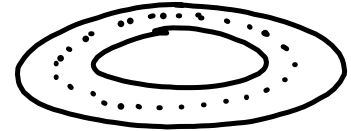
Date _____

Mrs. Ashley

Math 6 - Period _____

Warm-up: A high school track is 9.76 meters wide. It is divided into 8 lanes of equal width for track and field events. How wide is each lane? Show your work below.

$$\begin{array}{r}
 1.22 \\
 8 \overline{) 9.76} \\
 \underline{-8} \\
 17 \\
 \underline{-16} \\
 166 \\
 \underline{-166} \\
 0
 \end{array}$$



Each lane is 1.22 meters wide.


Describe, in complete sentences, how you can check your answer.

Multiply the quotient (1.22) by the divisor (8) to get the dividend (9.76). You can also use estimation to see if your answer is close.



Let's Investigate: What are the steps for dividing a decimal by a decimal?

Dividing a Decimal by a Decimal



WHEN A DECIMAL'S ON THE SIDE,
SLIDE, SLIDE!

Slide

1. Change the divisor to a whole number, by multiplying by a power of 10.
2. Multiply the dividend by the same power of 10. In other words...
move the decimal in the dividend the same number of spaces to the RIGHT! Slide
3. Place a decimal point in the quotient directly above the decimal point in the dividend. 'raise it to the roof'
4. Divide as you would with whole numbers.
5. Check your answer by multiplying the quotient and the divisor to obtain the dividend.

When a decimal's on the side: SLIDE, SLIDE;
 When a decimal's in the house: RAISE IT TO THE ROOF!

Steps:

- 1) Move decimal to make DIVISOR a whole number.
- 2) Move decimal SAME number of places in the DIVIDEND.
- 3) Divide and check.

Slide

a) $3.25 \div 0.5$

CHECK: Multiply the quotient by the divisor *original*

b) $1.287 \div 0.11$

CHECK: Multiply the quotient by the divisor

Slide



Now You Try! Find the quotient and check using multiplication!

Steps:

- 1) Move decimal to make DIVISOR a whole number.
- 2) Move decimal SAME number of places in the DIVIDEND.
- 3) Divide and check.

When a decimal's on the side: **SLIDE, SLIDE;**

When a decimal's in the house: **RAISE IT TO THE ROOF!**

Slide 

<p>1) $36.45 \div 0.09$</p> <p style="text-align: center; font-size: 2em;">405</p>	<p>CHECK: Multiply the <u>quotient</u> by the <u>divisor</u></p>
<p>2) $18.88 \div 1.6$</p> <p style="text-align: center; font-size: 2em;">11.8</p>	<p>CHECK: Multiply the <u>quotient</u> by the <u>divisor</u></p>

Attachments

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