desmos Unit 6.5, Family Resource

Unit 5 Summary

Prior Learning	Math 6, Unit 5	Future Learning		
 Grades 4–5 Rewriting decimals as fractions 	 Adding and subtracting decimals 	Math 6, Unit 6 Solving equations with decimals and fractions 		
 Multiplying and dividing whole numbers Place value with decimals 	Multiplying and dividing decimals	Math 7 and 8 Operations with positive and negative numbers 		
Math 6, Unit 4 Dividing fractions 	 Least common multiple and greatest common factor 	 Converting fractions to decimals 		

Adding and Subtracting Decimals

When adding and subtracting decimals, it is important to consider the **place value** of each digit.

We can think about 0.25 as 2 tenths and 5 hundredths or as 25 hundredths.

We can think about 0.3 + 0.25 as 3 tenths and 25 hundredths. This is the same as 30 hundredths+25 hundredths, which is 55 hundredths, or 0.55.

Rewriting addition and subtraction problems vertically can help us keep the place values organized.

On the left, we are correctly subtracting 2 tenths from 34 hundredths. On the right, we are subtracting 2 hundredths instead of 2 tenths.

		+ 0.2
0.	/ 34 2	× 0.3 – 0

0.14



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Multiplying and Dividing Decimals

It can be helpful to rewrite multiplication and division problems that have decimals by changing the decimals into whole numbers.

Multiplication

When we write $0.3 \cdot 0.04$ as fractions we can multiply whole numbers, and then think about the place value.

$$0.3 \cdot 0.04 = 3 \cdot 4 \cdot \frac{1}{10} \cdot \frac{1}{100}$$
$$= 12 \cdot \frac{1}{1000}$$
$$= 0.012$$

Division

When we write 3 as $\frac{30}{10}$ in the problem below, we are setting up a common denominator so that we can divide whole numbers.

$$3 \div 0.2 = \frac{30}{10} \div \frac{2}{10}$$

= 30 ÷ 2
= 15

Least Common Multiple and Greatest Common Factor

Here are lists of multiples of 3 and 4.

Common multiples of 3 and 4 are 12 and 24.

So the least common multiple (LCM) is 12.

Multiples of 3 3, 6, 9, 12, 15, 18, 21, 24,...

Multiples of 4 4, 8, 12, 16, 20, 24, 28, 32, ...

1, 2, 4, and 8 all divide into 8 evenly. These are called its factors.

Here are lists of factors of 8 and 12.

Common factors of 8 and 12 are 1, 2, and 4.

So the greatest common factor (GCF) is 4.

Factors of 8 1, 2, 4, 8 Factors 12

1, 2, 3, 4, 6, 12

Try This at Home

Adding and Subtracting Decimals

- 1.1 Add 0.6 + 0.32.
- 1.2 Add 0.125 + 5.42.
- 1.3 Subtract 0.6 0.32.
- 1.4 Subtract 1 0.238.
- 1.5 If you are checking out at the grocery store, make a prediction about the total bill. What other operations with decimals can you find on the receipt?

Multiplying and Dividing Decimals

- 2.1 Multiply $0.6 \cdot 0.02$.
- 2.2 Find the area of the rectangle.



- 2.4 Divide $45 \div 0.9$.
- 2.5 If you are at a gas station, make a prediction about how much the gas will cost. How close did you get? How might you improve your prediction?

Least Common Multiple and Greatest Common Factor

- 3.1 What is the least common multiple of 6 and 8?
- 3.2 What is the greatest common factor of 12 and 30?
- 3.3 If you are grocery shopping, how many hot dogs come in each pack? What about buns? Discuss what combinations of packs could help you avoid leftovers.









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Solutions:

- 1.1 0.92
- 1.2 5.545
- 1.3 0.28
- 1.4 0.762
- 1.5 Responses vary.
- 2.1 0.012
- 2.2 4.32 square units
- 2.3 9
- 2.4 50
- 2.5 Responses vary.
- 3.1 24
- 3.2 6
- 3.3 Responses vary.