# EUREKA MATH™ TIPS FOR PARENTS

## KEY CONCEPT OVERVIEW

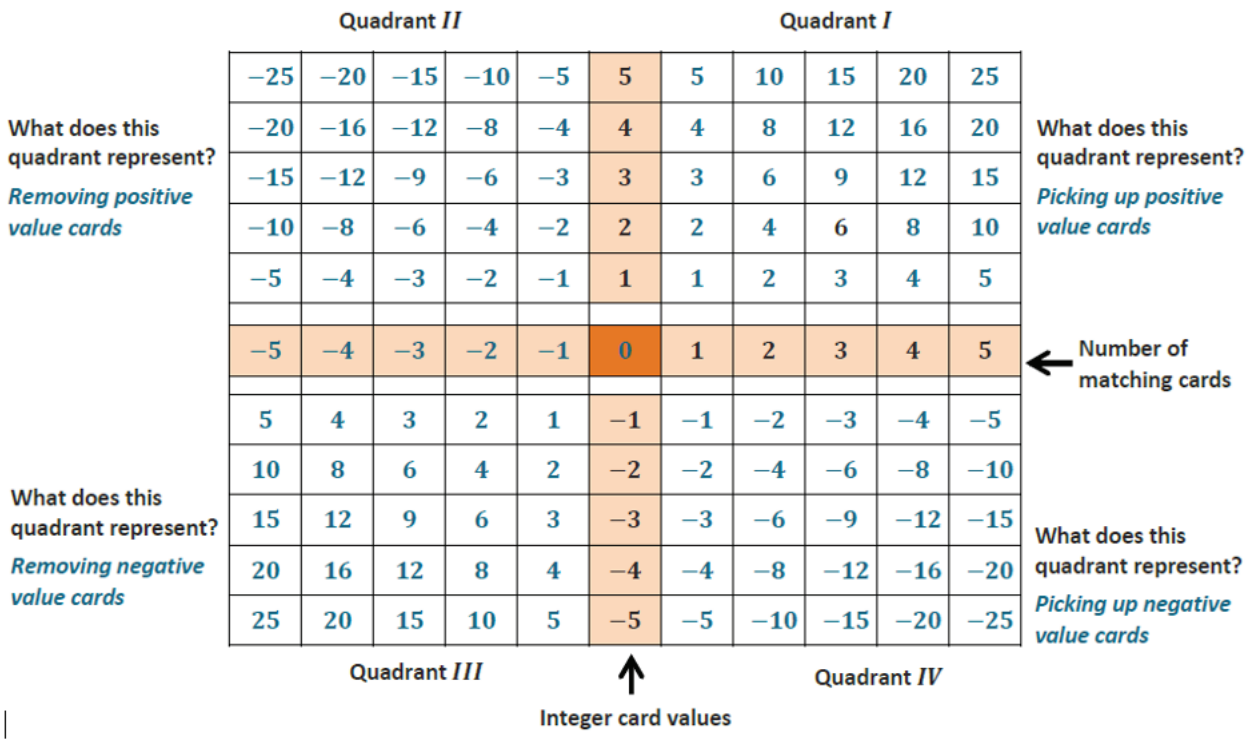
In Topic B, students continue to work with positive and negative integers and other rational numbers, extending their knowledge to multiplication and division. By playing the Integer Game (see the Sample Problem and Topic A), students recognize when products and quotients will be negative and when they will be positive. Students also extend their knowledge of operations with rational numbers to more complicated expressions.

You can expect to see homework that asks your child to do the following:

- Use the Integer Game to explain operations (mathematical processes) with integers.
- Multiply and divide integers and other rational numbers.
- Apply multiplication and division of integers to real-world contexts.
- Recognize patterns that indicate whether a product or quotient is positive or negative.
- Convert fractions to decimals and vice versa.
- Use properties, such as commutative or associative properties, to evaluate expressions efficiently.

## SAMPLE PROBLEMS *(From Lessons 11 and 12)*

Complete the table and answer the question for each quadrant.




| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| −25 | −20 | −15 | −10 | −5 | 5 | 5 | 10 | 15 | 20 | 25 |
| −20 | −16 | −12 | −8 | −4 | 4 | 4 | 8 | 12 | 16 | 20 |
| −15 | −12 | −9 | −6 | −3 | 3 | 3 | 6 | 9 | 12 | 15 |
| −10 | −8 | −6 | −4 | −2 | 2 | 2 | 4 | 6 | 8 | 10 |
| −5 | −4 | −3 | −2 | −1 | 1 | 1 | 2 | 3 | 4 | 5 |
| −5 | −4 | −3 | −2 | −1 | 0 | 1 | 2 | 3 | 4 | 5 |
| 5 | 4 | 3 | 2 | 1 | −1 | −1 | −2 | −3 | −4 | −5 |
| 10 | 8 | 6 | 4 | 2 | −2 | −2 | −4 | −6 | −8 | −10 |
| 15 | 12 | 9 | 6 | 3 | −3 | −3 | −6 | −9 | −12 | −15 |
| 20 | 16 | 12 | 8 | 4 | −4 | −4 | −8 | −12 | −16 | −20 |
| 25 | 20 | 15 | 10 | 5 | −5 | −5 | −10 | −15 | −20 | −25 |

## SAMPLE PROBLEM *(continued)*

Use the integer multiplication facts in their integer bubble to create six related integer division facts.

***Integers***

$-6 \times 4 = -24$ ***or*** $4 \times (-6) = -24$
$-4 \times 6 = -24$ ***or*** $6 \times (-4) = -24$
$-4 \times (-6) = 24$ ***or*** $-6 \times (-4) = 24$

***Integers***

$-6 \times 4 = -24 \longrightarrow -24 \div (-6) = 4$
$-24 \div 4 = -6$
$-4 \times 6 = -24 \longrightarrow -24 \div (-4) = 6$
$-24 \div 6 = -4$
$-4 \times (-6) = 24 \longrightarrow 24 \div (-4) = -6$
$24 \div (-6) = -4$

Additional sample problems with detailed answer steps are found in the *Eureka Math Homework Helpers* books. Learn more at GreatMinds.org.

## HOW YOU CAN HELP AT HOME

You can help at home in many ways. Here are just a few tips to help you get started:

- Practice simple multiplication or division problems involving integers as you and your child complete everyday tasks. Say a problem aloud and ask your child to solve it. See how many problems your child can solve during a set amount of time or from the beginning to the end of activities, such as washing dishes or a short trip in the car. To make practice more challenging, you may mix up the expressions to include addition, subtraction, multiplication, and division.
- Play "Integer War." Use a standard deck of cards, assigning one color to represent negative values and the other color to represent positive values. (Face cards represent 10 or −10.) Shuffle the deck and divide the cards evenly between you and your child. Each player flips over two cards at a time. The player who has the larger product wins that turn and collects both her own and the other player's cards. Continue to play until one player wins (by collecting all the cards).
- In preparation for Topic C, continue to play "Integer War" using addition, subtraction, multiplication, and division to help build your child's confidence with operations with integers.