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Fraction Alley Game
Grades 3-5 and 6-9 Edition

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Fraction Alley is a cooperative learning board-game for groups of three students. One student serves as the banker and judge while the remaining two students are players A and B. The judge uses numbered cards to generate fractions and mixed numbers for players A and B. Each player must move his or her game piece along the game path a distance equal to the value of the fraction or mixed number. The game path is scaled like a customary ruler. After each move, the player must answer a math question read by the judge. A correct answer earns the player money. An incorrect answer results in the player moving backward a predetermined length. This game will help students to master measurement, fractions, decimals, and particular math topics, depending on the selected library (3-5 edition: grade 3, grade 4, or grade 5 library) or (grades 6-9 edition: general math, computation, algebra, or geometry library). All three and four libraries are included in the respective grade-level editions, along with materials for an entire class.

Extreme Math Makeover
Student Workbooks

Regular Price: \$39

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Extreme Math Makeover student workbooks contain activities that will re-build students knowledge, understanding, and skills associated with whole numbers, fractions, decimals, percents, and integers. The problem solving and applications component of the program spans the math strands (number sense, algebra, measurement, geometry, statistics, and probability). All the problems and challenges are specially designed to inform students and lead them to mastery. This program is ideal for students in grades 8 or 9 who lack the prerequisite skills needed for the formal study of Algebra I or Math I. (Scroll down to see the table of contents and a few sample pages.)

Extreme Math Makeover

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Number Sense and Whole Numbers Student Activity 1-3

- Understanding Whole Numbers

Work with a Partner. Choose any Three. Read each statement carefully and try to understand the point of the statement. Develop an explanation that fits the statement. Be prepared to share your explanations with the class.

1) The sum of any two even numbers is always even. Surprisingly, the sum of any two odd numbers is always even. Explain why!

2) The number 2 is the only even prime number. It is impossible for any other even number to be prime. Explain why!

3) Each and every whole number, greater than or equal to two, has a unique prime factorization. Explain why!

4) Every whole number greater than zero has more multiples than whole number factors. Explain why!

5) Without the Order of Operations mathematicians would experience a great deal of confusion. Explain why!

Math Vocabulary

sum

prime number

greater than

factor

mathematician

even number

equal

zero

multiple

odd number

prime factorization

whole number

Order of Operations

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Number Sense and Whole Numbers Student Activity 1-4

- Properties of Whole Numbers

Directions: Match the letter of the property to the equation that represents the property.

1. _____ $5(14 + 20) = 70 + 100$
2. _____ $58 + 0 = 58$
3. _____ $16 + 90 = 90 + 16$
4. _____ $(17 + 18) + 2 = 17 + (18 + 2)$
5. _____ $23 (1) = 23$
6. _____ $65 + - 65 = 0$
7. _____ $(18 + 12) + 34 = 34 + (18 + 12)$
8. _____ $(11 + 19) + 10 = (19 + 11) + 10$
9. _____ $7(10 - 2) = 70 - 14$
10. _____ $5 (1/5) = 1$
11. _____ $(18 + 17) + 0 = (18 + 17)$
12. _____ $(27 + 23) + 25 = 27 + (23 + 25)$
13. _____ $19 + - 19 = 0$
14. _____ $100 (1/100) = 1$
15. _____ $24 (3) = 3 (24)$



Math Properties

- A) commutative property (+ or •)
- B) associative property (+ or •)
- C) distributive property

- D) identity property (+ or •)
- E) inverse property (+ or •)

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Number Sense, Whole Numbers and Measurement Student Activity 1-9

AB _____

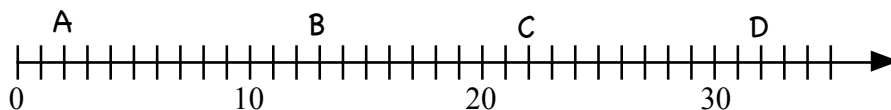
AC _____

AB + BC _____

BD _____

AD _____

1. Use the number line to find the measures to the left.



2. Use the table of measures to complete the following.

Length

- 4 feet = _____ inches
9 yards = _____ feet
2 miles = _____ feet
2 miles = _____ yards
3 meters = _____ centimeters

Time

- 3 hours = _____ minutes
7 days = _____ hours
2 weeks = _____ days
5 minutes = _____ seconds
2 years = _____ months

Table of Measures

- 1 foot (ft.) = 12 inches (in.)
1 yard (yd.) = 3 ft. = 36 in.
1 mile (mi.) = 5280 ft. = 1760 yd.
1 pound (lb.) = 16 ounces (oz.)
1 ton (T) = 2000 lbs.
1 gallon (gal.) = 4 quarts (qts.)
1 qt. = 2 pints (pts.)
1 pt. = 16 fluid oz. = 2 cups (c.)
1 tablespoon (tbs) = 1/2 fluid oz.
1 teaspoon (tsp.) = 1/3 tbs.
1 year (yr.) = 365 days
1 year = 52 weeks = 12 months
1 day = 24 hours (hrs.)
1 hr. = 60 minutes (min.)
1 min. = 60 seconds (sec.)

3. Use a ruler with inches to find the following measures.
Round your answers to the nearest whole inch

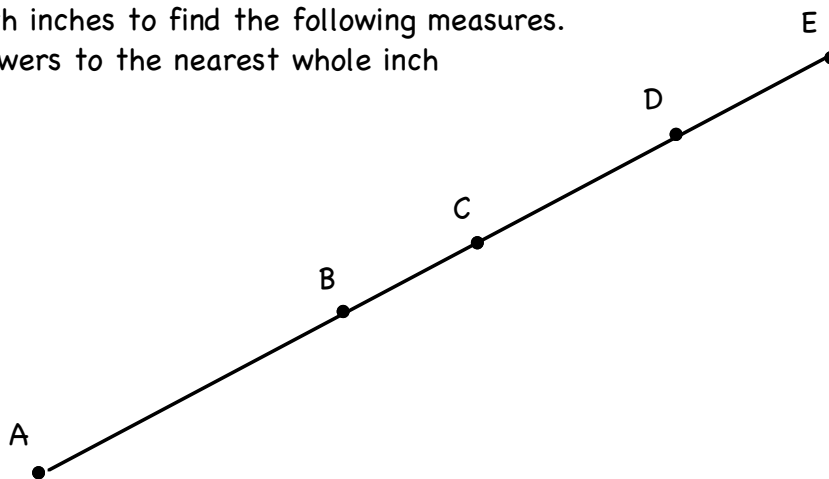
AB _____

AC _____

CE _____

DA _____

EA _____



Extreme Math Makeover

Number Sense, Fractions, Decimals and Percents Student Activity 2-6

- Decimals and +, -, x, ÷

Problem Set 1: Perform all operations and simplify.

1. _____ $4.5 + 6.24 + 14.125$

2. _____ $.6(2 - 1.2) + 4.5$

3. _____ $(18.5 - 12.5)^2 + (1.2 + .8)^2$

4. _____ $3 \cdot 8.4 + 6.5 \div .5$

5. _____ $12 \cdot 2.5 + (7.8 - 2.8)^2$

6. _____ $.8 \overline{) 6.48}$

7. _____ $12.5 (1.2)$

8. _____ $.25 (28.2 + 11.8) + .5 \cdot 8.6$

9. _____ $.50 (64.7 - 14.7) + .5 \cdot 1.24$

10. _____ $.5 \cdot 20 - 1.5 (2.300 + 3.600 + .1)$



Thinking Backwards:

Use the numbers 2, .5, .25, and 4 and the operations +, -, •, and ÷, and at least one set of parentheses to create a numeric expression whose value is 12.