Materials for Opening Exercise

Photo copy each page and cut out the triangles and quadrilaterals for use in the Opening Exercise.
GROUP 1:   Where can you buy a ruler that is 3 feet long?

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<tbody>
<tr>
<td>3</td>
<td>4.5</td>
<td>3.5</td>
<td>-1</td>
<td>-2</td>
<td>19</td>
<td>18.95</td>
<td>4.22</td>
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What value(s) of \( z \) makes the equation \( \frac{7}{6} z + \frac{1}{3} = -\frac{5}{6} \) true; \( z = -1, z = 2, z = 1 \), or \( z = \frac{36}{63} \)?

Find the smaller of 2 consecutive integers if the sum of the smaller and twice the larger is \(-4\).

Twice the sum of a number and \(-6\) is \(-6\). Find the number.

Logan is 2 years older than Lindsey. Five years ago the sum of their ages was 30. Find Lindsey’s current age.

The total charge for a taxi ride in NYC includes an initial fee of $3.75 plus $1.25 for every \( \frac{1}{2} \) mile traveled. Jodi took a taxi and the ride cost her exactly $12.50. How many miles did she travel in the taxi?

The perimeter of a triangular garden with 3 equal sides is 12.66 feet. What is the length of each side of the garden?

A car travelling at 60 mph leaves Ithaca and travels west. Two hours later a truck travelling at 55 mph leaves Elmira and travels east. All together the car and truck travel 407.5 miles. How many hours does the car travel?

The Cozo family has 5 children. While on vacation they went to a play. They bought 5 tickets at the child’s price of $10.25 and 2 tickets at the adult’s price. If they spent a total of $89.15, how much was the price of each adult ticket?
GROUP 2: Where do fish keep their money?

| 2 | -1 | 10 | 8 | 2 | -6 | 5 | 50 | \( \frac{1}{8} \) |

What value of \( z \) makes the equation \( \frac{2}{3}z - \frac{1}{2} = -\frac{5}{12} \) true? \( z = -1, z = 2, z = \frac{1}{8}, z = -\frac{1}{8} \)?

Find the smaller of 2 consecutive even integers if the sum of twice the smaller integer and the larger integers is \(-16\).

Twice the difference of a number and \(-3\) is \(4\). Find the number.

Brooke is 3 years younger than Samantha. In five years the sum of their ages will be \(29\). Find Brooke’s age.

Which of the following equations is equivalent to \(4.12x + 5.2 = 8.23\)?

1. \(412x + 52 = 823\)
2. \(412x + 520 = 823\)
3. \(9.32x = 8.23\)
4. \(0.412x + 0.52 = 8.23\)

The length of a rectangle is twice the width. If the perimeter of the rectangle is 30 units, find the area of the garden?

A car travelling at 70 miles per hour travelled one hour longer than a truck travelling at 60 miles per hour. If the car and truck travelled a total of 330 miles, for how many hours did the car and truck travel all together?

Jeff sold half of his baseball cards then bought sixteen more. He now has 21 baseball cards. How many cards did he begin with?
**GROUP 3:** The more you take, the more you leave behind. What are they?

| 8 | 11.93 | 368 | $\frac{5}{6}$ | 10.50 | $2 \frac{1}{2}$ | $3 \frac{5}{6}$ | 21 | 4 |

An apple has 80 calories. This is 12 less than $\frac{1}{4}$ the number of calories in a package of candy. How many calories are in the candy? **O**

The ages of 3 brothers are represented by consecutive integers. If the oldest brother’s age is decreased by twice the youngest brother’s age, the result is $-19$. How old is the youngest brother? **P**

A carpenter uses 3 hinges on every door he hangs. He hangs 4 doors on the first floor and $x$ doors on the second floor. If he uses 36 hinges total, how many doors did he hang on the second floor? **F**

Kate has 12 $\frac{1}{2}$ pounds of chocolate. She gives each of her 5 friends $x$ pounds each and has 3 $\frac{1}{3}$ pounds left over. How much did she give each of her friends? **T**

A room is 20 feet long. If a couch that is 12 $\frac{1}{3}$ feet long is to be centered in the room, how big of a table can be placed on either side of the couch? **E**

Which equation is equivalent to $\frac{1}{4}x + \frac{1}{5} = 2$?

(1) $4x + 5 = \frac{1}{2}$

(2) $\frac{2}{5}x = 2$

(3) $5x + 4 = 18$

(4) $5x + 4 = 40$ **S**

During a recent sale, the first movie purchased cost $29$ and each additional movie purchased costs $m$ dollars. If Jose buys 4 movies and spends a total of $64.80$, how much did each additional movie cost? **O**

The Hipster Dance company purchases 5 bus tickets that cost $150$ each, and they have 7 bags that cost $b$ dollars each. If the total bill is $823.50$, how much does each bag cost? **S**

The weekend before final exams, Travis studied 1.5 hours for his science exam, $2 \frac{1}{4}$ hours for his math exam, and $h$ hours each for Spanish, English, and Social Studies. If he spent a total of 11 $\frac{1}{4}$ hours studying, how much time did he spend studying for Spanish? **T**
Die Templates:
Game or Additional Exercises (12 minutes)

Make copies of the puzzle below and cut the puzzle into 16 smaller squares. Mix up the pieces. Give each student a puzzle, and tell them to put the pieces together to form a $4 \times 4$ square. When pieces are joined, the problem on one side must be attached to the answer on the other. All problems on the top, bottom, right, and left must line up to the correct graph of the solution. The puzzle, how it is given below, is the answer key.