## The Correct Brick Road

| Level | 3 (Age group 11-14) |
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| Resources <br> Required | Notecards with numbers on it <br> Paper <br> Pencil |
| Alternate Options <br> for the Resources | Students can make 30 notecards, the size of their palm, with any composite <br> numbers below 100: <br> Pick 30 composite numbers(any number from 1-100 excluding the numbers 2, <br> $3,5,7,11,13,17,19, ~ 23, ~ 29, ~ 31, ~ 37, ~ 41, ~ 43, ~ 47, ~ 53, ~ 59, ~ 61, ~ 67, ~ 71, ~ 73, ~ 79, ~ 83, ~ 89 ~$ <br> and 97) |
| Strand Covered | Numbers \& Operations |
| Targeted Skills | Factorize composite numbers |
| Inspired by | Study.com |
| Time Required | 15 minutes for the game <br> 15 minutes for preparation |
| Previous Learning <br> Required | Prime numbers |
| Support Required | Medium support |

## Rules of the Game:

| Goal | The individual that has the most points at the end of the game, wins |
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| Rules | Once a card is drawn, it cannot be swapped out <br> Points system: <br> The student who writes out the correct brick road the fastest for each card gets <br> 2 points <br> Students who write out the correct brick road but aren't the fastest, get 1 point <br> Students who write the incorrect brick road gets 0 points |
| The game ends when three times the number of cards has been drawn as the |  |
| number of players. For example, if there are 4 players, then the game ends |  |
| when 12 cards are drawn |  |$|$| Step 1: The notecards are placed in the middle of the players (3-6 players) |
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| Steps 2: Player 1 draws a card from the pile and reads it aloud. For example, it |
| has the number 12 written on it |


|  | Step 3: All the players (including player 1) write out a brick road of prime <br> factorization numbers that lead to the number 12 (2, 2, and 3). See the image <br> reference below for an example of the brick road. <br> Step 4: Points are allocated for this round based on the points system in the <br> rules section <br> Step 5: Player 2 draws the next card, and the process repeats <br> Step 6: The game ends when 9 rounds have been completed in a game with 3 <br> players and the winner is declared the player with the most points. |
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| Images or <br> Illustrations | Example of correct brick road for prime factorization of 12: |
| Variations of the | 1.The number range could be increased to 1-150 instead of 1-100 <br> 2. One point is lost for every incorrect brick road <br> Game |
| Enrichment | None <br> 1. The learners group up, so they decide collectively what the brick road <br> ought to be <br> 2. Composite numbers from 1-50 are chosen instead of 1-100 |

