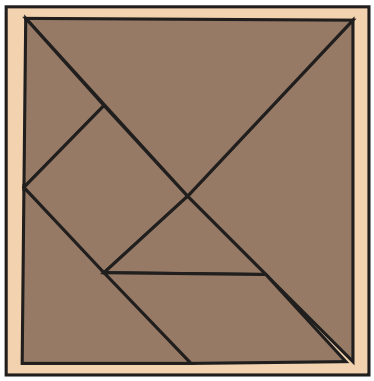
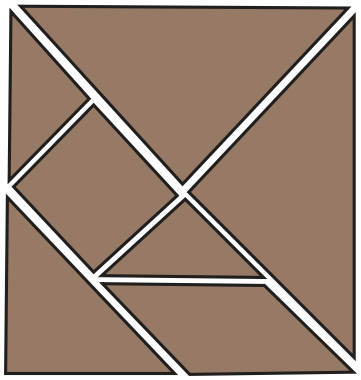
PUZZLES&GAMES
SOLUTIONS

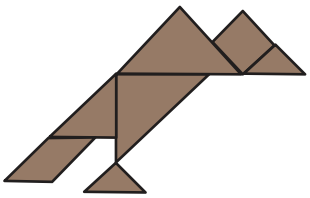
SIAMMANDALAY

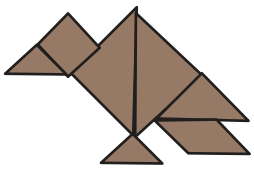
TANGRAM

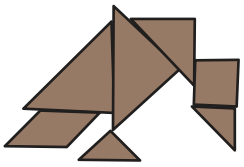


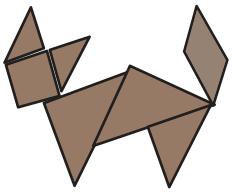


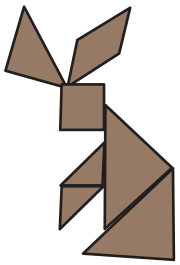
Components

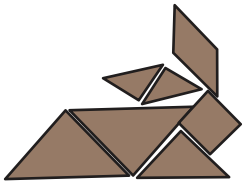


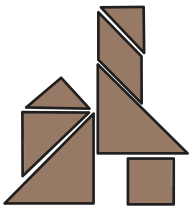


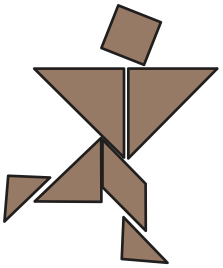


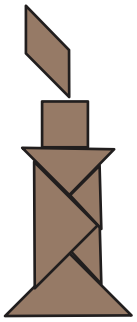


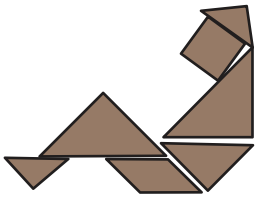


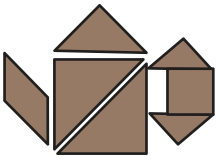


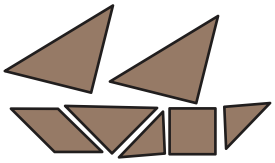


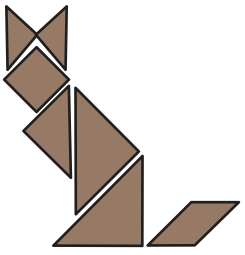


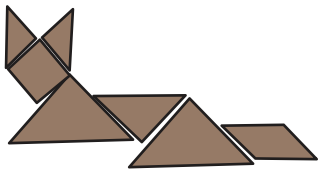


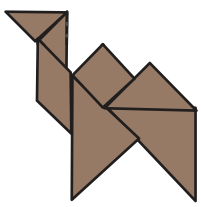


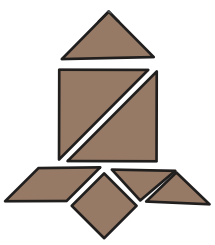


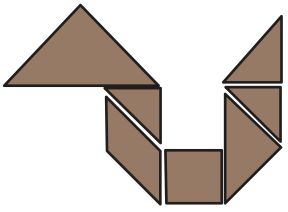












SIAMMANDALAY COMPANY LTD.
25/1 MOO 2 T.PABONG, A.SARAPEE, CHIANG MAI, THAILAND 50140

TEL: +66 5326 3350 FAX: +66 5324 9854
WWW.SIAMMANDALAY.COM | INFO@SIAMMANDALAY.COM

©2002-2018 SIAMMANDALAY CO.,LTD. ALL RIGHTS RESERVED.

Q-BITZ ROUNDS

OBJECTIVES

•Explore Newton's Laws of Motion* •Recognize gravity •Use creativity to build a functioning maze •Observing position & motion* •Use trial and error*

*Indicates STEM and/or Common Core objectives

GRADES

3-5

ESTIMATED TIME

Flexible based on classroom needs

MATERIALS NEEDED

•Q-bitz cards & trays (at least one per group)

PROCEDURE

Divide students into groups of 3-8. Students should sit at a table or around their desks.

Provide students with at least one Q-bitz board and a set of Q-bitz cards.

The first player in the group pulls a Q-bitz card and displays it in the middle.

All Q-bitz pieces should be passed with the tray or in the middle so everyone can reach them.

Q-BITZ ROUNDS

PROCEDURE

The first player places 1 Q-bitz piece in the wooden tray according to the pattern and then passes the tray to the next player. (Sliding is recommended so that cubes don't move)

If an incorrect cube is played, another player will have to correct the cube. This correction counts as a turn and play may not add another cube to the board.

Added challenges:

- Compete with other groups in the classroom. Who can complete the challenge fastest?
- Show students the card for 10 seconds. They must complete the puzzles without looking at the card.
- Pass two puzzles at once. For this version, pass the card with the puzzle instead of placing it in the center.

FOLLOW UP

- What puzzles were the most difficult to replicate?
- What was challenging about doing the puzzles as a group?
- Do you think it would be easier to do on your own?
- Did you feel stressed or pressured when you were competing against other teams? Did this make it more challenging?
- What was your strategy when you were choosing which piece to play?

Q·bitz
DESTREZA VISUAL. JUEGO CON CUBOS.

Objetivo
Ser el primero en organizar sus cubos para que igualen al diseño que muestra la carta. Recoja una carta cada vez que gana. El jugador con el mayor número de cartas después de nueve vueltas, gana el juego.

Preparación
Cada uno de los jugadores toma una bandeja y un juego de 16 cubos del mismo color. Coloque la pila de cartas Q-bitz boca abajo en el centro del área de juego. Cada vuelta del juego comienza con todos los cubos fuera de las bandejas.

Cómo jugar
Primera vuelta – Cualquiera de los jugadores voltea la primera carta Q-bitz de la pila. Los jugadores compiten en recrear el diseño que muestra la carta usando su juego de cubos, rotándolos según lo necesiten. El primer jugador que complete el diseño grita "¡Q-bitz!" Si todos los jugadores están de acuerdo en que el diseño es correcto, se le concede la carta al ganador. Si el diseño no es correcto, se reanuda el juego.

Segunda vuelta – Cualquiera de los jugadores voltea la primera carta Q-bitz de la pila. Todos los jugadores tiran todos sus cubos sobre dado con forma de mesa y, con las formas que quedan boca arriba, colocan en su bandeja tantos cubos como les sea posible para recrear el diseño que muestra la carta. Los jugadores rápidamente vuelven a tirar todos los cubos que no han podido utilizar hasta lograr las formas que necesitan para completar el diseño. El primer jugador que completa el diseño grita, "¡Q-bitz!" Si todos los jugadores están de acuerdo que el diseño es correcto, se le concede la carta al ganador. Si el diseño no es correcto, se reanuda el juego.

Tercera vuelta – Cualquiera de los jugadores voltea la primera carta Q-bitz de la pila. Los jugadores tienen 10 segundos para memorizar la carta. Se coloca la carta boca abajo y los jugadores deben tratar de organizar los cubos en su bandeja de manera que formen el diseño de la carta de memoria. El jugador que considera que ha recreado el diseño o tiene el mayor número de cubos en las posiciones correctas, grita "¡Q-bitz!" El jugador con el diseño correcto, o con el mayor número de cubos en los lugares correctos, gana la carta.

Cómo ganar el juego
Juegue 3 series de 3 vueltas. El jugador con el mayor número de cartas ¡gana!

Opción de juego
Elija jugar una vuelta en vez de jugar las tres, y ¡juegue tantas vueltas como lo desee!

Q·bitz

VISUAL DEXTERITY. CUBED.

For 2 to 4 Players • Ages 8 & Up

Contents:
80 Q·bitz Cards
4 Wooden Trays
4 Sets of 16 Cubes

MindWare®

Q·bitz
VISUAL DEXTERITY. CUBED.

Object
Be the first to correctly arrange your cubes to match the pattern on the card. Collect a card each time you win. The player with the most cards after nine rounds wins the game.

Set Up
Each player takes a tray and a set of 16 same-colored cubes. Place the stack of Q•bitz cards facedown in the center of the playing area. Each round of game play starts with all cubes out of the trays.

Playing the Game
Round 1 - Any player turns over the top Q•bitz card. Players race to recreate the pattern shown on the card using their set of cubes, rotating the cubes in any way. The first player to complete the pattern shouts, "Q•bitz!" If all players agree the pattern is correct, the winner is awarded the card. If the pattern is not correct, play resumes.

Round 2 - Any player turns over the top Q•bitz card. Players roll all of their cubes on the table like dice. Using the cubes as rolled (face up), players place as many cubes as possible in their tray to recreate the pattern shown on the card. Players race to re-roll all remaining unusable cubes until they roll shapes that are needed to complete the pattern. The first player to complete the pattern shouts, "Q•bitz!" If all players agree the pattern is correct, the winner is awarded the card. If the pattern is not correct, play resumes.

Round 3 - Any player turns over the top Q•bitz card. Players have 10 seconds to memorize the card. The card is then turned facedown and players must try to arrange the cubes in their tray to match the card from memory. The player who thinks he or she has recreated the pattern or has the most cubes in the correct places shouts, "Q•bitz!" The player with a correct pattern, or the most cubes in the correct places, wins the card.

Winning the Game
Play 3 sets of 3 rounds. The player with the most cards wins!

Game Play Option
Choose from one of the rounds of play, rather than all three, and play as many rounds as you wish!

MindWare® brainy toys for kids of all ages®

for other MindWare products visit
www.mindware.com

Copyright © 2009 MindWare

Q·bitz
DEXTÉRITÉ VISUELLE. AVEC DES CUBES.

But du jeu
Être le premier à disposer correctement ses cubes pour qu'ils reproduisent le motif de la carte et recevoir la carte chaque fois que l'on est le premier à atteindre ce but. Le joueur ayant le plus de cartes après neuf manches gagne la partie.

Préparation
Chaque joueur prend un plateau et un ensemble de 16 cubes de même couleur. Placez la pile de cartes Q-bitz face vers le bas au centre de l'espace de jeu. Chaque manche de la partie commence avec tous les cubes à l'extérieur des plateaux.

Jeu
Manche 1 – Un des joueurs retourne la carte Q-bitz du haut de la pile. Les joueurs essaient de recréer le motif représenté sur la carte le plus rapidement possible en utilisant leur ensemble de cubes qui peuvent être tournés dans tous les sens. Le premier joueur à recréer le motif s'écrie « Q-bitz »! Si tous les joueurs reconnaissent que le motif est correctement reproduit, la carte est donnée au gagnant. Si le motif est incorrect, le jeu reprend.

Manche 2 – Un des joueurs retourne la carte Q-bitz du haut de la pile. Les joueurs jettent tous leurs cubes sur la table comme des dés. En utilisant les cubes jetés (face vers le haut), les joueurs placent autant de cubes que possible dans leur plateau pour recréer le motif représenté sur la carte. Les joueurs s'empressent de jeter à nouveau les cubes non utilisés jusqu'à l'apparition des formes nécessaires à la reproduction du motif. Le premier joueur à recréer le motif s'écrie « Q-bitz »! Si tous les joueurs reconnaissent que le motif est correctement reproduit, la carte est donnée au gagnant. Si le motif est incorrect, le jeu reprend.

Manche 3 – Un des joueurs retourne la carte Q-bitz du haut de la pile. Les joueurs ont 10 secondes pour mémoriser la carte. La carte est ensuite retournée face vers le bas et les joueurs doivent essayer de disposer les cubes sur leur plateau pour reproduire de mémoire le motif de la carte. Le joueur qui pense qu'il a recréé le motif ou qui a le plus de cubes placés correctement s'écrie « Q-bitz »! Le joueur qui a recréé correctement le motif ou qui a le plus de cubes correctement placés gagne la carte.

Pour gagner
Jouez 3 parties de 3 manches. Le joueur gagnant est celui qui a obtenu le plus de cartes!

Variante
Choisissez de jouer l'une des manches du jeu au lieu de jouer les trois manches en série et jouez autant de manches que vous le souhaitez!

FRONT

BACK

BLOCK BY BLOCK

Includes:

- 7 Block Pieces
- 60 Challenge Cards with Hints to the Solutions
- Game-Go Bag

Your Goal:

Combine the pieces to match the image on the challenge card.

To Play:

- Spill out the seven pieces on a table.
- Select a challenge card from the deck.
- Assemble the pieces to match the image on the card.

Continued on back ➤

If You Get Stuck:

Hints can be found on the back of each card. A hint will show you how the indicated blue pieces come together to form the part of the image pictured in white.

More Ways to Play:

Block by Block® challenges can be assembled in many ways other than the solutions we have provided. For example, there are 240 unique solutions for challenge number 60 alone!

About the Inventor:

Block by Block® was originally known as the Soma Cube®, invented by Piet Hein in the 1930's. Special thanks to Sivhy Farhi for sharing research and discoveries in making this game.

Ignite Your Mind!®

ThinkFun® is the world's leader in addictively fun games that stretch and sharpen your mind. From lighting up young minds to creating fun for the whole family, ThinkFun's innovative games and mobile apps make you think while they make you smile.

www.ThinkFun.com

ThinkFun®

©2007 ThinkFun Inc. MADE IN CHINA, 104. #5931. INCards02.

ThinkFun

gordian's KNOT

BRAINTEASER CHALLENGE

14+

single player

TAKE-APART SOLUTION GUIDE

History of the original Gordian Knot

The original Gordian Knot is a famous story from the eigth century B.C. Asia Minor. As the story goes, the people had lost their king and their oracle announced that the next person to ride into town pulling an oxcart would be the new ruler. That person was Gordius, who, once crowned, tied up his cart with an extremely intricate knot. Over time, legend grew that the person who solved the knot would rule the world. For 400 years the knot remained a puzzle until Alexander the Great solved it and went on to rule great kingdoms.

Since ancient times, the Gordian Knot has been synonymous with the unsolvable puzzle. Today the tradition of the world's toughest puzzle continues. Our modern version will challenge your intellect and try your patience, but who knows, once you solve Gordian's Knot®, you too may rule great kingdoms.

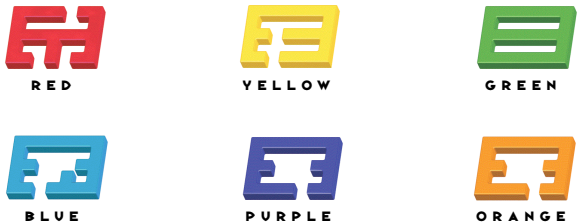
Gordi-6820-IN02-A 7/19/10 1:23 PM Page 1

Gordian's KNOT

BRAINTEASER CHALLENGE

The World's Most Difficult Take-Apart Puzzle!

COMPONENTS:



© 2005 ThinkFun Inc. All Rights Reserved. IN02

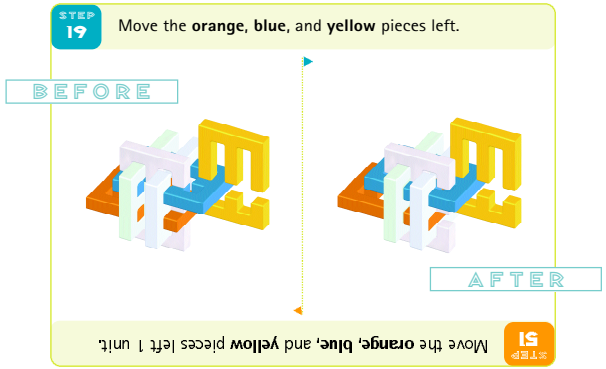
Gordi-6820-IN02-A 7/19/10 1:23 PM Page 2

This side of the guide contains step-by-step instructions on how to take the puzzle apart. If you flip the guide over, you'll see instructions on how to put it back to together.

TAKING APART GORDIAN'S KNOT®

Slide the colored pieces back and forth, moving and removing pieces as you are able. To solve the puzzle, you'll have to discover the right combination of moves in order to remove the pieces. Sometimes you'll have to move several pieces together at the same time. There are no trick moves! You'll never have to rotate, turn, or use brute force on any of the pieces.

The image opposite shows a sample set of instructions. The current step is described at the top of the page. On the left is an image of what the puzzle should look like before you perform the instruction. The right image shows what the puzzle will look like after the instruction.



There are six possible directions a piece can move: left, right, up, down, toward you, and away from you. (The images in this guide have been turned to the left slightly so that you can see more of the puzzle).

Gordi-6820-IN02-A 7/19/10 1:23 PM Page 4

MOVING THE PIECES

Unless an instruction specifically says to do differently, you should move each piece as far as it will go. **In each image, we've highlighted only the piece (or pieces) that move and muted all the other pieces.**

Some of the instructions will specify the number of "units" that a puzzle piece, or set of pieces, should be moved **(a unit = the thickness of a puzzle piece—each piece is one unit thick, five units wide, and seven units long)**. In these cases, you need to be careful NOT to move the piece as far as it can go, and instead be careful to stop movement of the piece (or pieces) at the position indicated by the directions. The picture diagram will help make this task clear.

Book design: George A. Miller

ABOUT THE INVENTOR

Gordian's Knot® was invented by Frans de Vreugd, a Dutch puzzle inventor and originally named "Extreme Torture." The inventor used a computer program to determine the most difficult configuration possible for a six-piece puzzle.

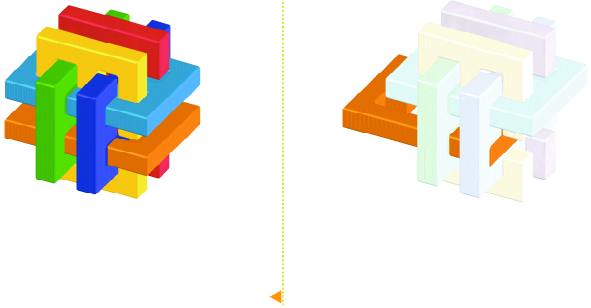
ABOUT THINKFUN®

ThinkFun® is the leading creator of mind challenging games. Since 1985, the company has produced award-winning games such as Rush Hour®, River Crossing®, and Aha! Brainteaser Classics™. Kids and adults alike look to ThinkFun to create hands-on, thought-provoking games that provide hours of fun-filled challenges. ThinkFun is committed to high-quality, innovative games that help people of all ages develop thinking skills through play. To learn more, please visit our website: **www.ThinkFun.com**.

Gordi-6820-IN02-A 7/19/10 1:23 PM Page 6

STEP 1

Move the **orange** piece left.

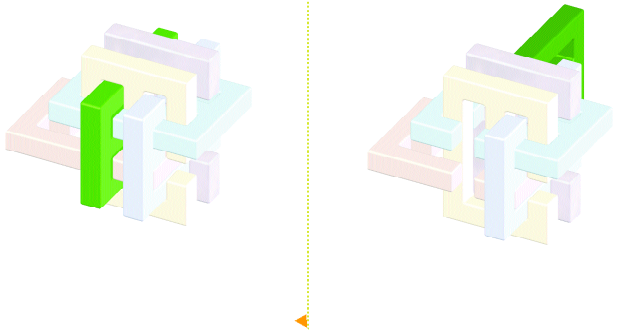


STEP 69

Move the **orange** piece left.

STEP 2

Move the **green** piece away from you.



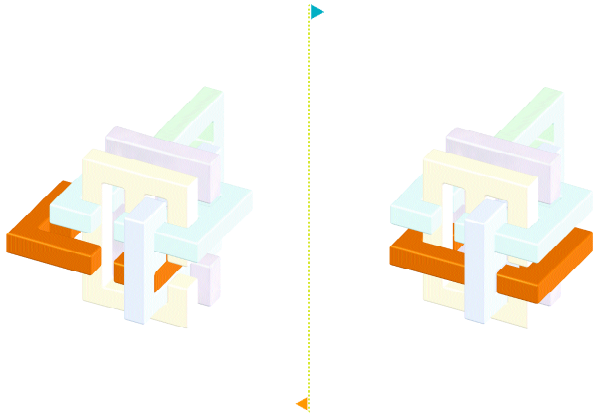
STEP 68

Move the **green** piece toward you.

Gordi-6820-IN02-A 7/19/10 1:23 PM Page 8

STEP 3

Move the **orange** piece right.

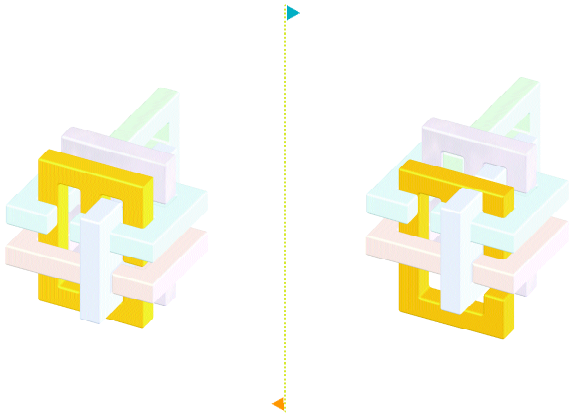


STEP 67

Move the **orange** piece right.

STEP 4

Move the **yellow** piece down.



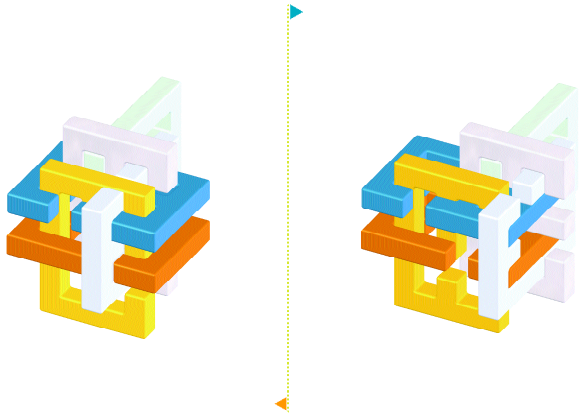
STEP 66

Move the **yellow** piece down.

Gordi-6820-IN02-A 7/19/10 1:23 PM Page 10

STEP 5

Move the **blue**, **orange**, and **yellow** pieces left.

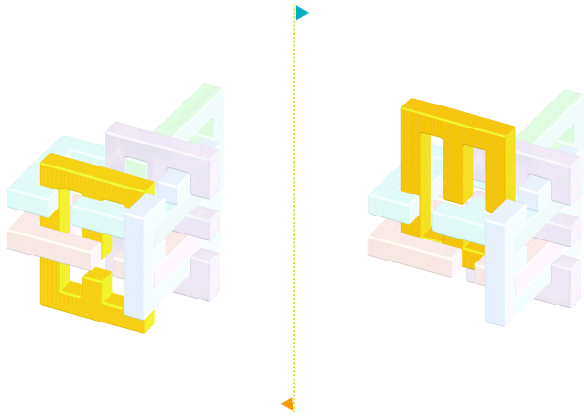


STEP 65

Move the **blue**, **orange**, and **yellow** pieces left.

STEP 6

Move the **yellow** piece up 3 units.



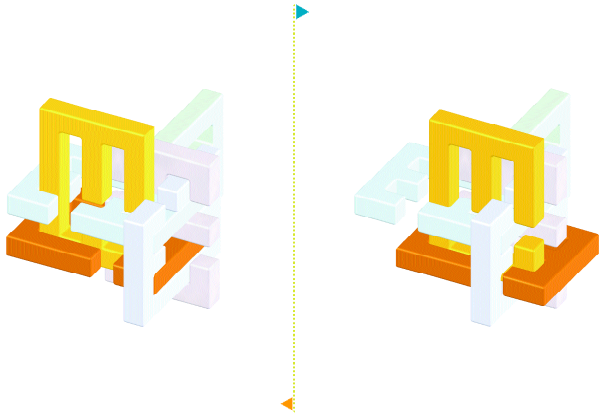
STEP 64

Move the **yellow** piece up.

Gordi-6820-IN02-A 7/19/10 1:23 PM Page 12

STEP 7

Move the **yellow** and **orange** pieces right.

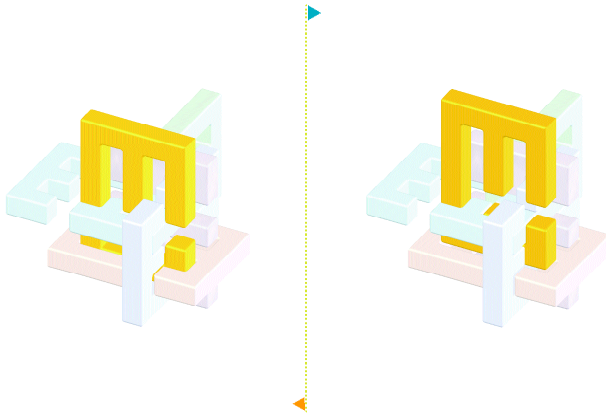


STEP 63

Move the **yellow** and **orange** pieces right.

STEP 8

Move the **yellow** piece up.



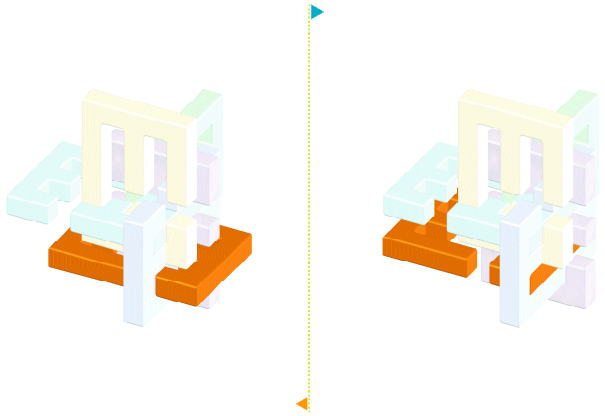
STEP 62

Move the **yellow** piece up.

Gordi-6820-IN02-A 7/19/10 1:23 PM Page 14

STEP 9

Move the **orange** piece left.

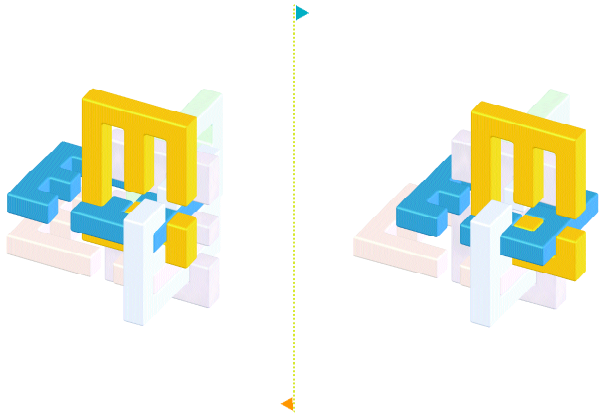


STEP 61

Move the **orange** piece left.

STEP 10

Move the **blue** and **yellow** pieces right 2 units.



STEP 60

Move the **blue** and **yellow** pieces right.

Gordi-6820-IN02-A 7/19/10 1:23 PM Page 16

STEP 11

Move the **green** piece toward you.

STEP 59

Move the **green** piece away from you 3 units.

STEP 12

Move the **blue** and **yellow** pieces right.

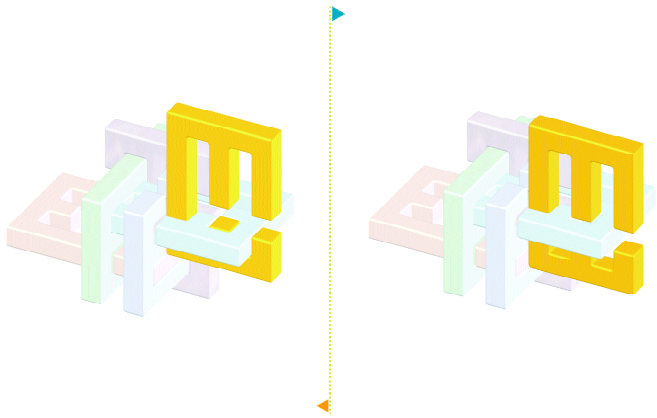
STEP 58

Move the **blue** and **yellow** pieces right.

Gordi-6820-IN02-A 7/19/10 1:23 PM Page 18

STEP 13

Move the **yellow** piece down 1 unit.

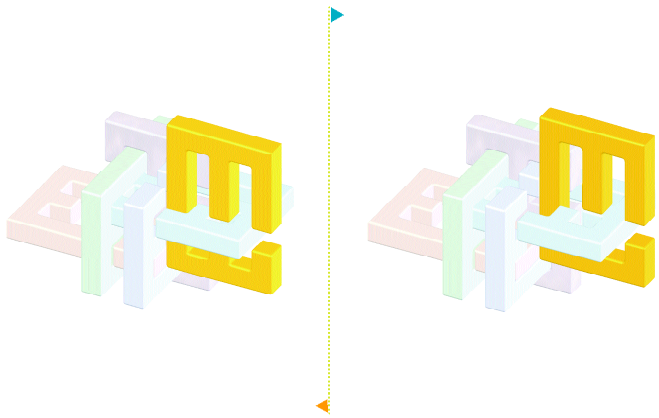


STEP 57

Move the **yellow** piece down.

STEP 14

Move the **yellow** piece away from you.



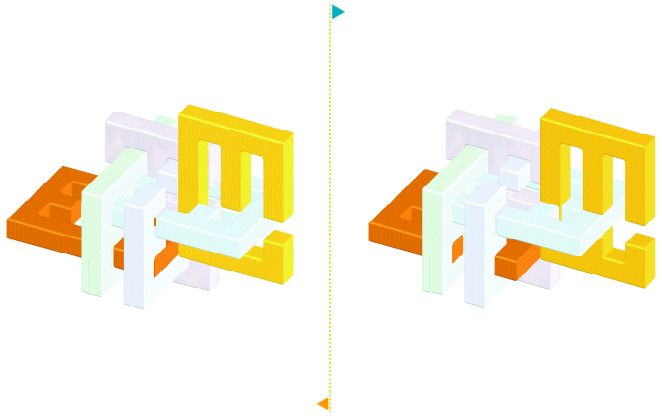
STEP 56

Move the **yellow** piece toward you.

Gordi-6820-IN02-A 7/19/10 1:23 PM Page 20

STEP 15

Move the **orange** and **yellow** pieces right.

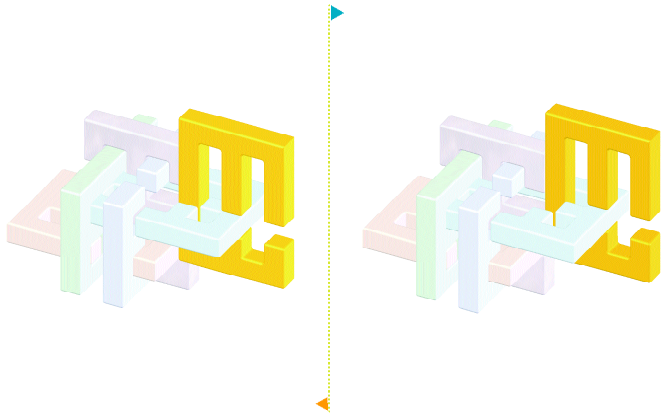


STEP 55

Move the **orange** and **yellow** pieces right.

STEP 16

Move the **yellow** piece away from you.



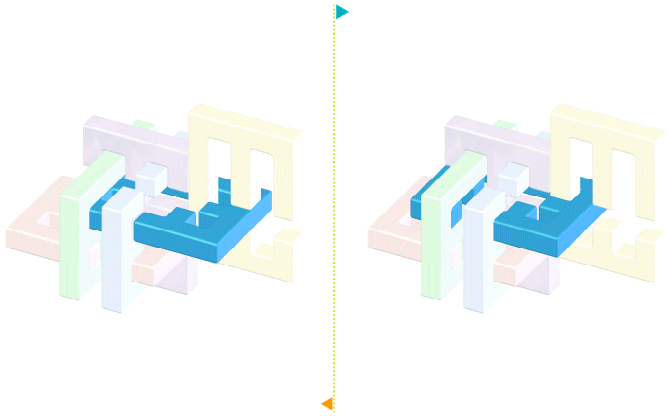
STEP 54

Move the **yellow** piece toward you.

Gordi-6820-IN02-A 7/19/10 1:23 PM Page 22

STEP 17

Move the **blue** piece left.

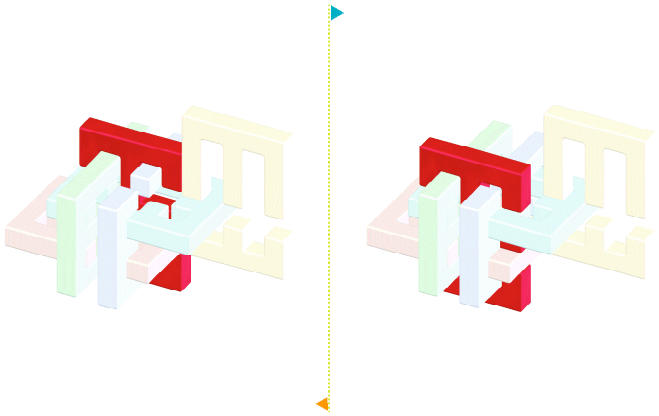


STEP 53

Move the **blue** piece left.

STEP 18

Move the **red** piece toward you.



STEP 52

Move the **red** piece away from you.

Gordi-6820-IN02-A 7/19/10 1:23 PM Page 24

STEP 19

Move the **orange**, **blue**, and **yellow** pieces left.

STEP 51

Move the **orange**, **blue**, and **yellow** pieces left 1 unit.

STEP 20

Move the **green** piece away from you.

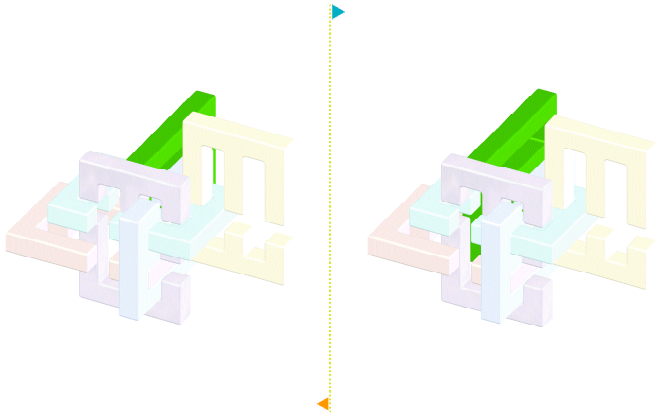
STEP 50

Move the **green** piece toward you.

Gordi-6820-IN02-A 7/19/10 1:23 PM Page 26

STEP 21

Move the **green** piece left.

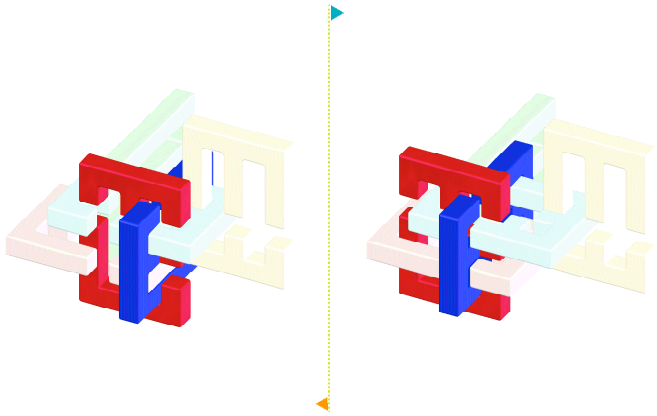


STEP 49

Move the **green** piece left 1 unit.

STEP 22

Move the **red** and **purple** pieces left.



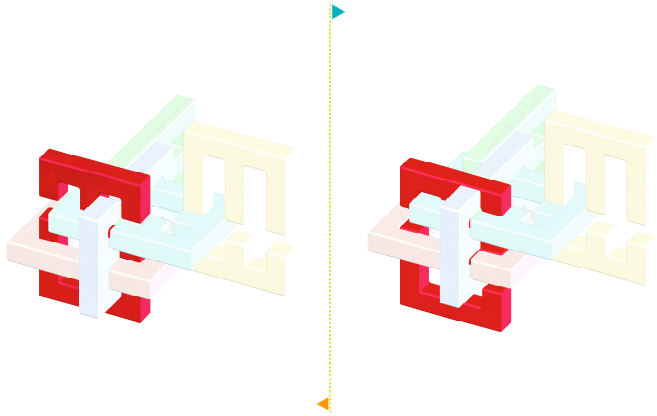
STEP 48

Move the **red** and **purple** pieces left.

Gordi-6820-IN02-A 7/19/10 1:23 PM Page 28

STEP 23

Move the **red** piece down.

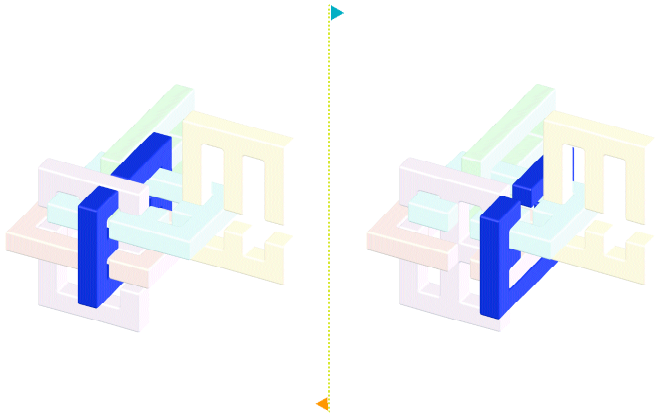


STEP 47

Move the **red** piece down.

STEP 24

Move the **purple** piece right.



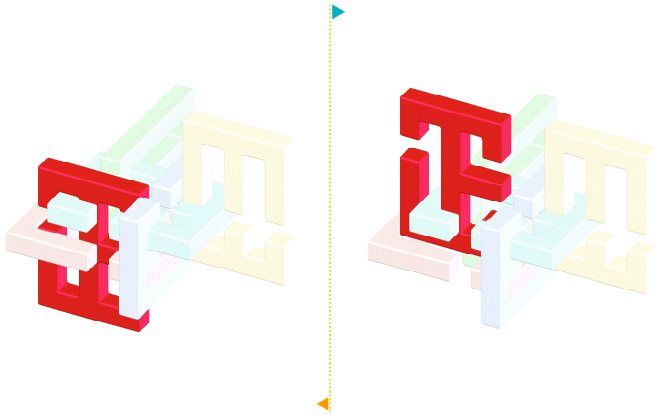
STEP 46

Move the **purple** piece right.

Gordi-6820-IN02-A 7/19/10 1:23 PM Page 30

STEP 25

Move the **red** piece up.

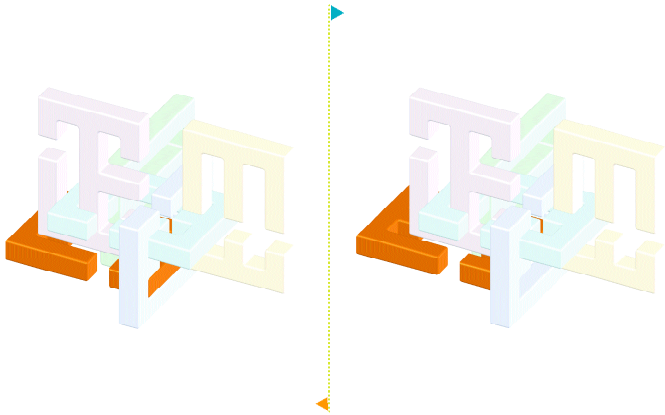


STEP 45

Move the **red** piece up.

STEP 26

Move the **orange** piece left 1 unit.



STEP 44

Move the **orange** piece left.

Gordi-6820-IN02-A 7/19/10 1:23 PM Page 32

STEP 27

Move the **orange** piece away from you.

STEP 43

Move the **orange** piece toward you.

STEP 28

Move the **orange** piece left out of the puzzle.

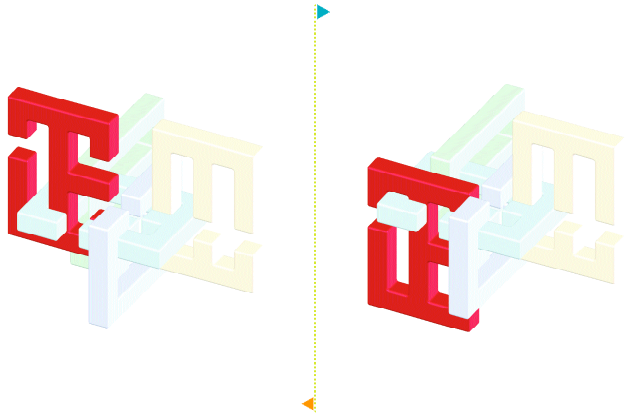
STEP 42

Move the **orange** piece left into the puzzle (into **green** piece).

Gordi-6820-IN02-A 7/19/10 1:23 PM Page 34

STEP 29

Move the **red** piece down.

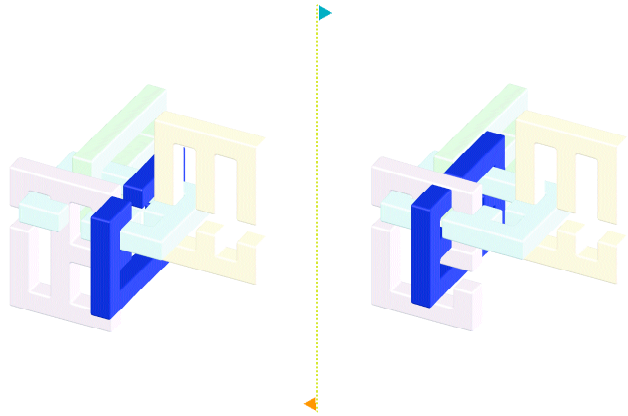


STEP 41

Move the **red** piece down.

STEP 30

Move the **purple** piece left.



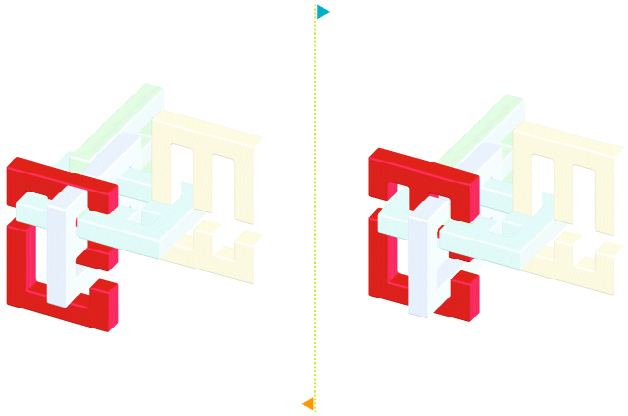
STEP 40

Move the **purple** piece left.

Gordi-6820-IN02-A 7/19/10 1:23 PM Page 36

STEP 31

Move the **red** piece up.

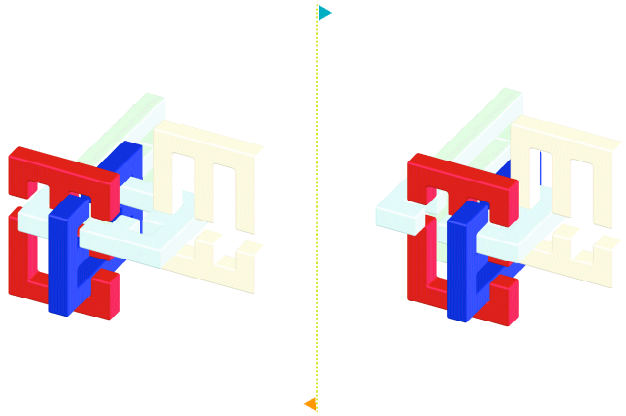


STEP 39

Move the **red** piece up.

STEP 32

Move the **red** and **purple** pieces right.



STEP 38

Move the **red** and **purple** pieces right.

Gordi-6820-IN02-A 7/19/10 1:23 PM Page 38

STEP 33

Move the **green** piece right 1 unit.

STEP 37

Move the **green** piece right.

STEP 34

Move the **green** piece toward you.

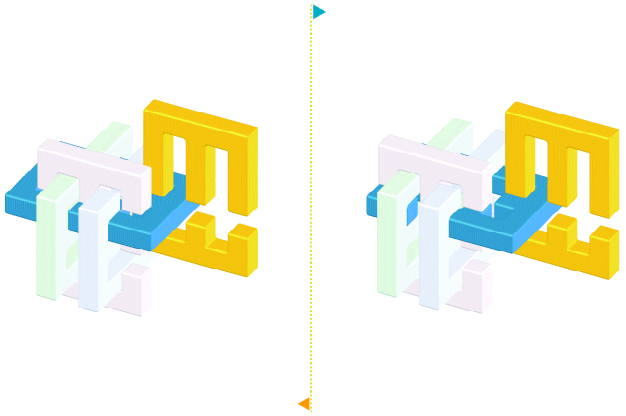
STEP 36

Move the **green** piece away from you.

Gordi-6820-IN02-A 7/19/10 1:23 PM Page 40

STEP 35

Move the **yellow** and **blue** pieces right 1 unit.

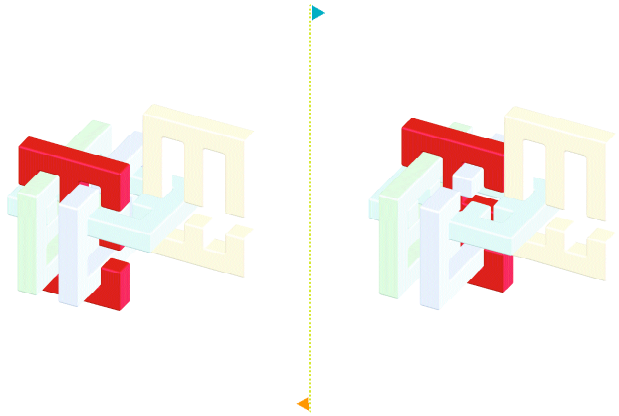


STEP 35

Move the **yellow** and **blue** pieces right.

STEP 36

Move the **red** piece away from you.



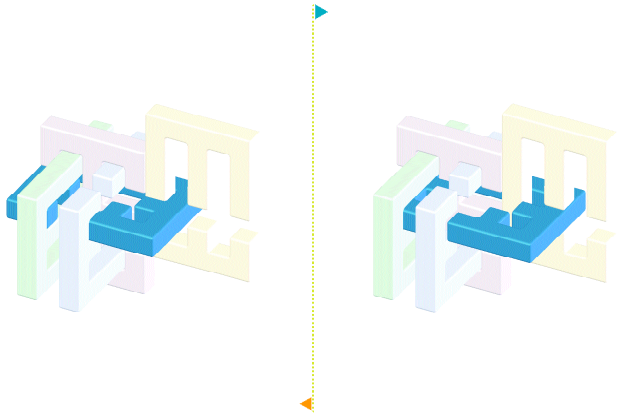
STEP 34

Move the **red** piece toward you.

Gordi-6820-IN02-A 7/19/10 1:23 PM Page 42

STEP 37

Move the **blue** piece right.

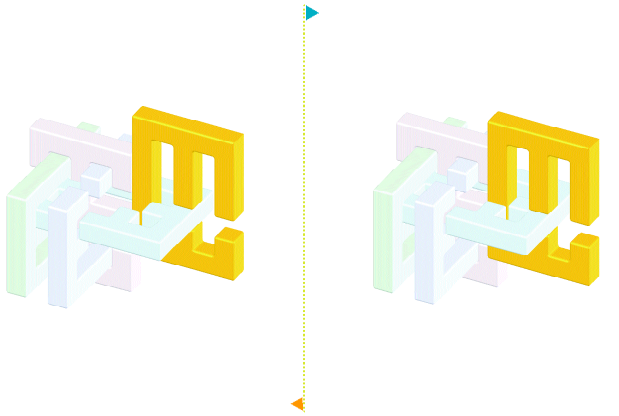


STEP 33

Move the **blue** piece right.

STEP 38

Move the **yellow** piece toward you.



STEP 32

Move the **yellow** piece away from you.

Gordi-6820-IN02-A 7/19/10 1:24 PM Page 44

STEP 39

Move the **yellow** piece left.

STEP 31

Move the **yellow** piece left.

STEP 40

Move the **yellow** piece toward you.

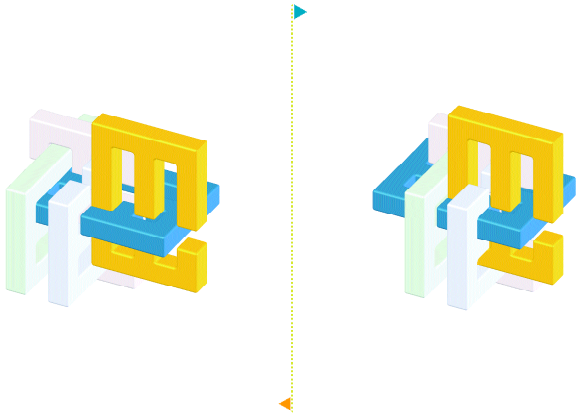
STEP 30

Move the **yellow** piece away from you.

Gordi-6820-IN02-A 7/19/10 1:24 PM Page 46

STEP 41

Move the **yellow** and **blue** pieces left.

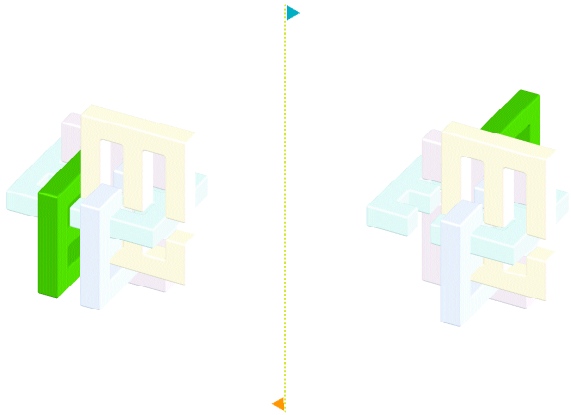


STEP 29

Move the **yellow** and **blue** pieces left.

STEP 42

Move the **green** piece away from you.



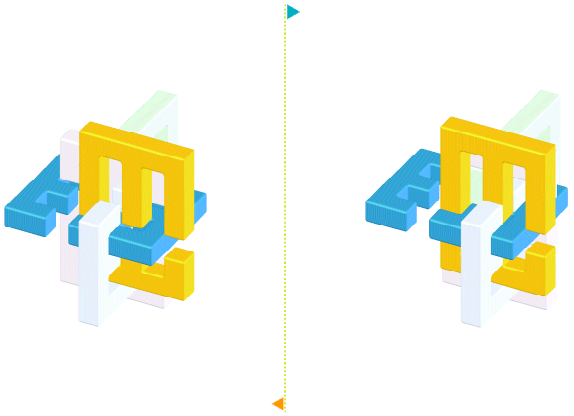
STEP 28

Move the **green** piece toward you.

Gordi-6820-IN02-A 7/19/10 1:24 PM Page 48

STEP 43

Move the **yellow** and **blue** pieces left 1 unit.

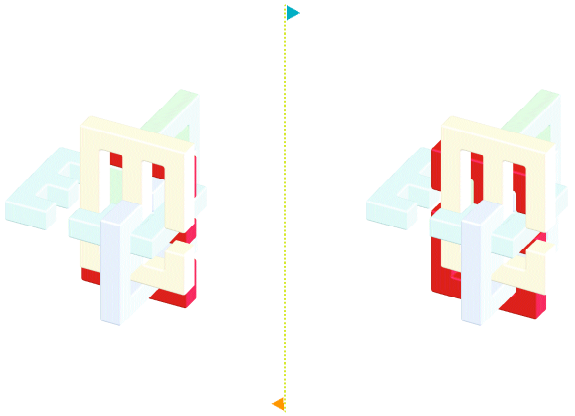


STEP 27

Move the **yellow** and **blue** pieces left 1 unit.

STEP 44

Move the **red** piece toward you.



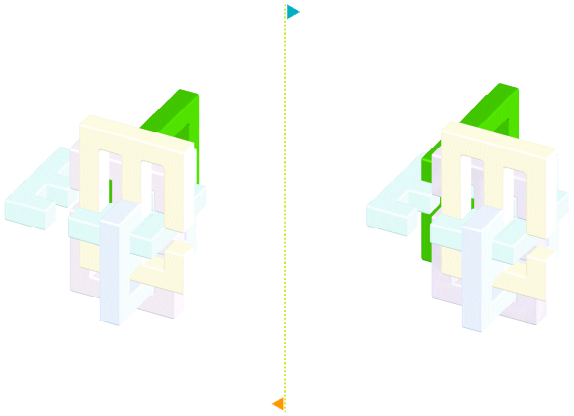
STEP 26

Move the **red** piece away from you.

Gordi-6820-IN02-A 7/19/10 1:24 PM Page 50

STEP 45

Move the **green** piece left.

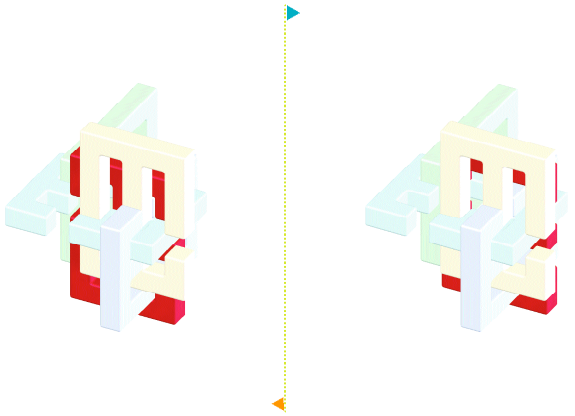


STEP 25

Move the **green** piece left 2 units.

STEP 46

Move the **red** piece away from you.



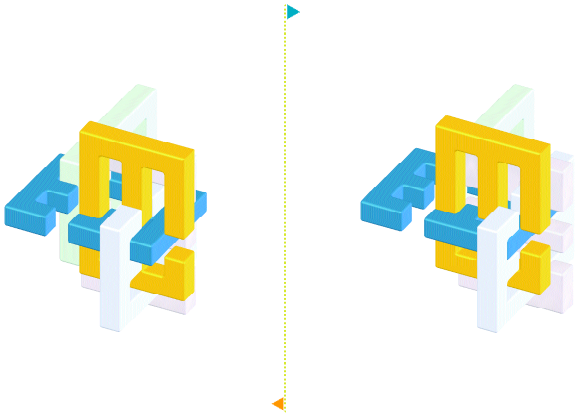
STEP 24

Move the **red** piece toward you.

Gordi-6820-IN02-A 7/19/10 1:24 PM Page 52

STEP 47

Move the **yellow** and **blue** pieces left.

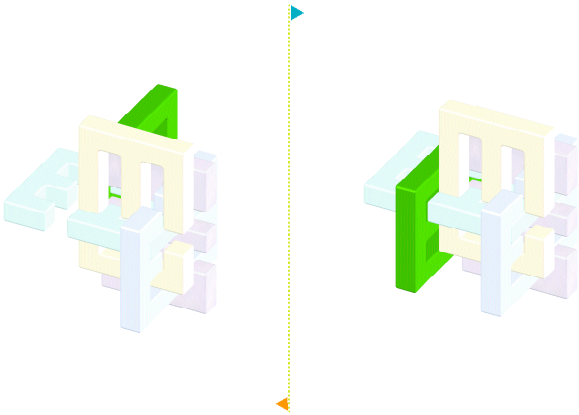


STEP 23

Move the **yellow** and **blue** pieces left.

STEP 48

Move the **green** piece toward you.



STEP 22

Move the **green** piece away from you.

Gordi-6820-IN02-A 7/19/10 1:24 PM Page 54

STEP 49

Move the **green** piece left out of the puzzle.

STEP 21

Move the **green** piece left into the puzzle.

STEP 50

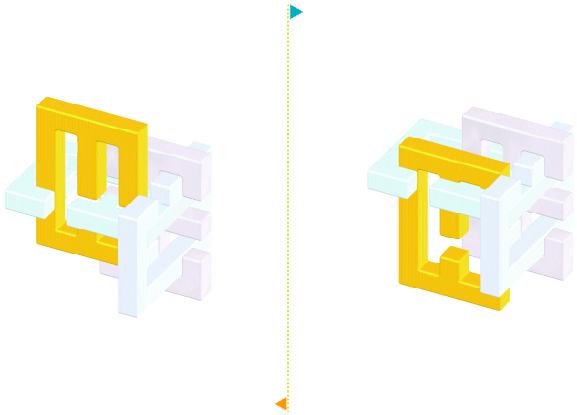
Move the **yellow** piece left.

STEP 20

Move the **yellow** piece left.

STEP 51

Move the **yellow** piece down.

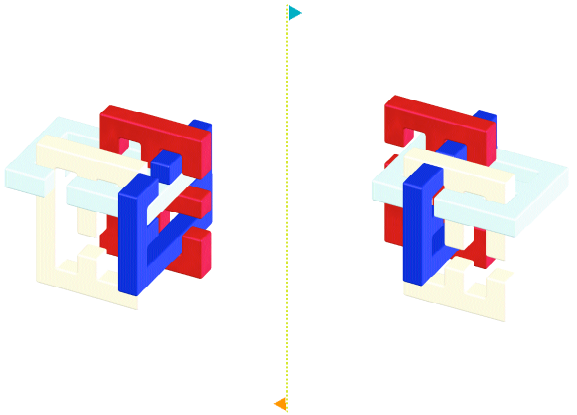


STEP 19

Move the **yellow** piece down 3 units.

STEP 52

Move the **red** and **purple** pieces left.



STEP 18

Move the **red** and **purple** pieces left.

Gordi-6820-IN02-A 7/19/10 1:24 PM Page 58

STEP 53

Move the **yellow** piece up.

STEP 17

Move the **yellow** piece up.

STEP 54

Move the **purple** piece away from you.

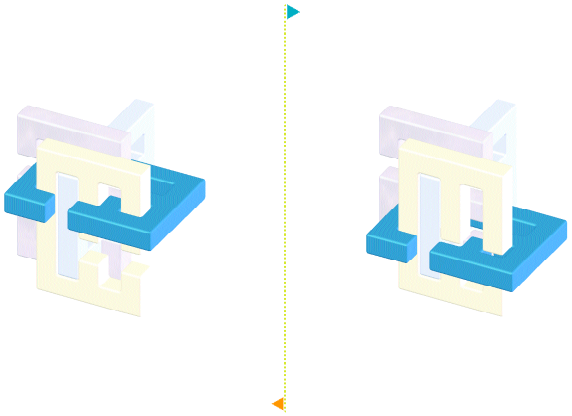
STEP 16

Move the **purple** piece toward you.

Gordi-6820-IN02-A 7/19/10 1:24 PM Page 60

STEP 55

Move the **blue** piece down.

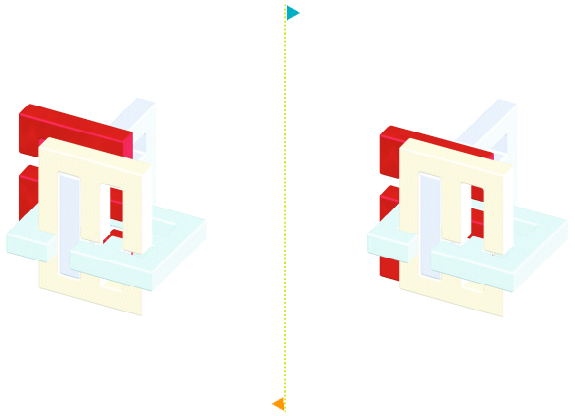


STEP 15

Move the **blue** piece down.

STEP 56

Move the **red** piece down.



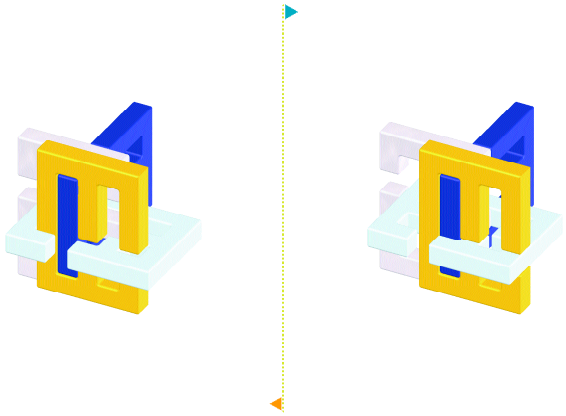
STEP 14

Move the **red** piece down.

Gordi-6820-IN02-A 7/19/10 1:24 PM Page 62

STEP 57

Move the **yellow** and **purple** pieces right.

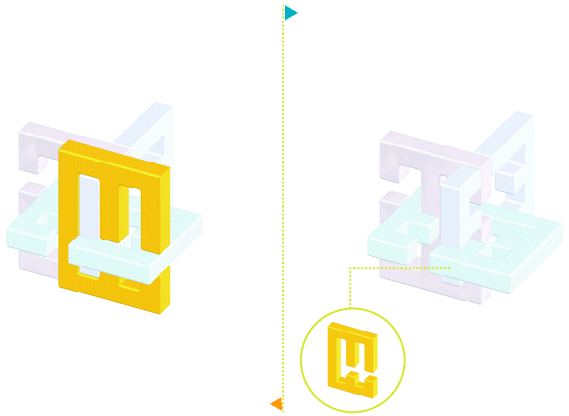


STEP 13

Move the **yellow** and **purple** pieces right.

STEP 58

Move the **yellow** piece toward you out of the puzzle.



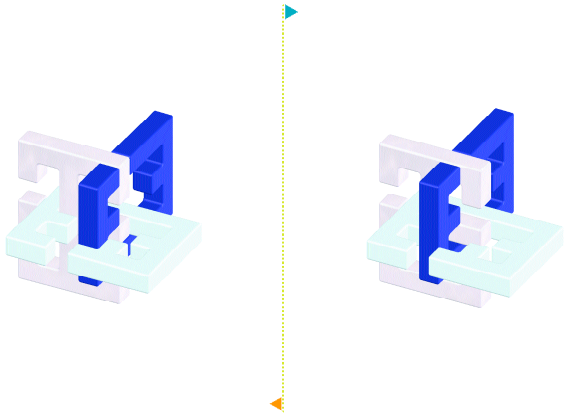
STEP 12

Move the **yellow** piece away from you 2 units into the puzzle.

Gordi-6820-IN02-A 7/19/10 1:24 PM Page 64

STEP 59

Move the **purple** piece left.

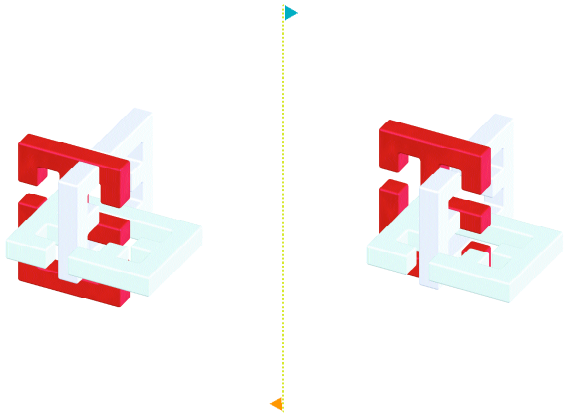


STEP 11

Move the **purple** piece left.

STEP 60

Move the **red** piece up.



STEP 10

Move the **red** piece up.

Gordi-6820-IN02-A 7/19/10 1:24 PM Page 66

STEP 61

Move the **blue** piece up.

STEP 9

Move the **blue** piece up.

STEP 62

Move the **purple** piece toward you.

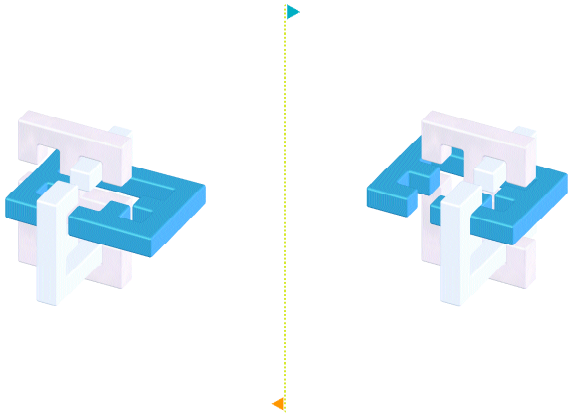
STEP 8

Move the **purple** piece away from you.

Gordi-6820-IN02-A 7/19/10 1:24 PM Page 68

STEP 63

Move the **blue** piece left 2 units.

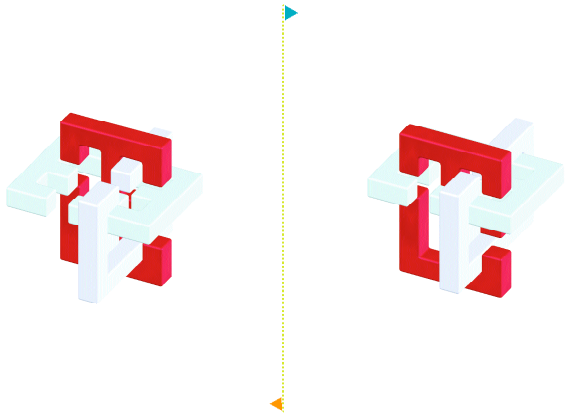


STEP 7

Move the **blue** piece left.

STEP 64

Move the **red** piece toward you.

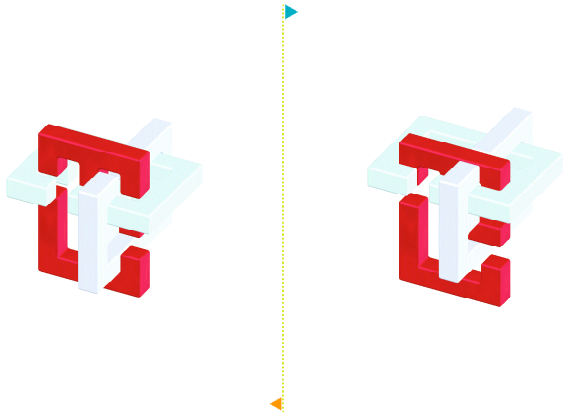


STEP 6

Move the **red** piece away from you.

STEP 65

Move the **red** piece down.

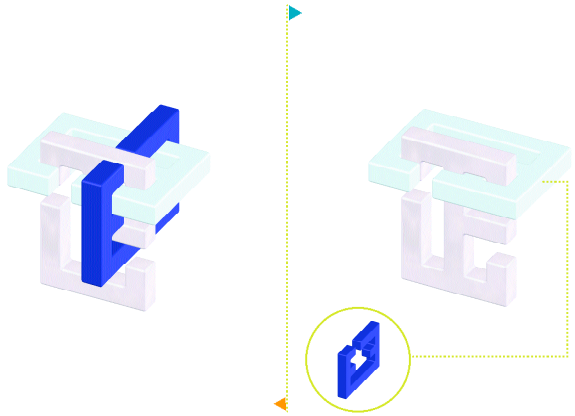


STEP 5

Move the **red** piece down.

STEP 66

Move the **purple** piece right out of the puzzle.



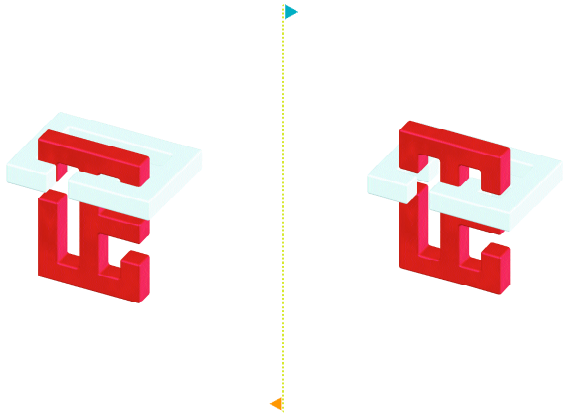
STEP 4

Move the **purple** piece right into the puzzle.

Gordi-6820-IN02-A 7/19/10 1:24 PM Page 72

STEP 67

Move the **red** piece up.

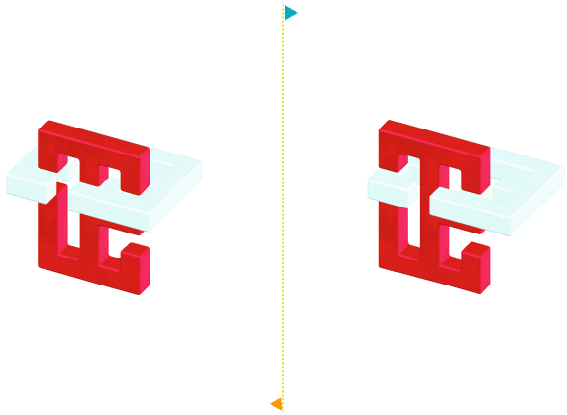


STEP 3

Move the **red** piece up.

STEP 68

Move the **red** piece left 1 unit.

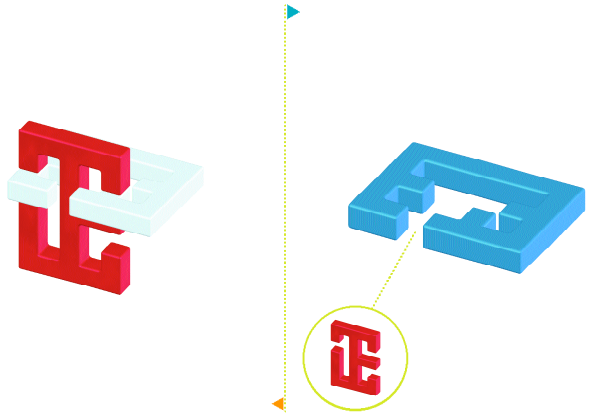


STEP 2

Move the **red** piece left.

STEP 69

Move the **red** piece toward you out of the puzzle.



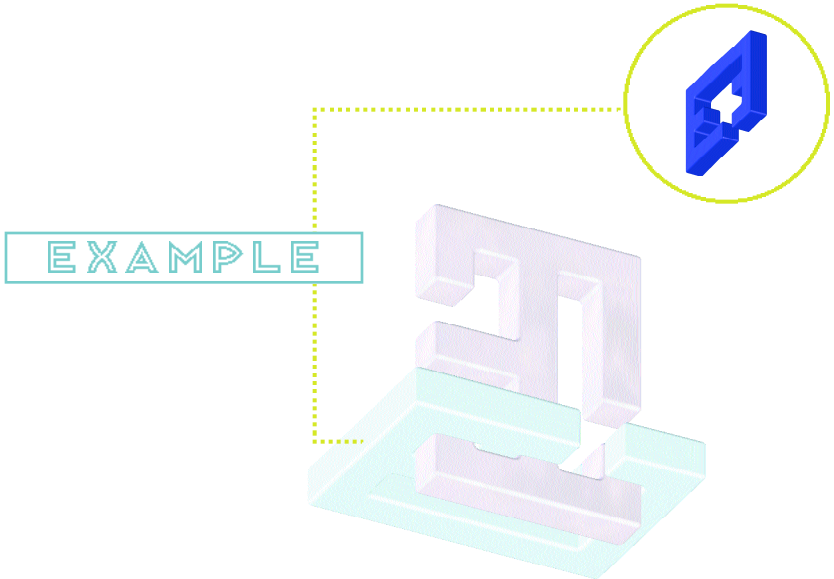
STEP 1

Move the **red** piece away from you 2 units into the blue piece.

PUTTING GORDIAN'S KNOT® BACK TOGETHER

Putting Gordian's Knot® back together uses the same solution sequence as does taking it apart, except you follow all the steps in reverse order.

To help you with inserting a new piece into the puzzle, we have highlighted an image of that piece in its correct orientation in the corner of the page.



ThinkFun

gordian's KNOT

BRAINTEASER CHALLENGE

14+

Single player

ASSEMBLE SOLUTION GUIDE