



Rich Learning Tasks

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Problem Solving and Reasoning

Name:

Away from Home

Locations A, B, and C are all on the same road as Home.

Read and apply the following statements, replacing X with a value which is greater than 3:

- A is $\frac{3}{X}$ of the way to B from home.
- C is $\frac{2}{3}$ of the way to A from home.

Show where A, B, and C should be. You may estimate.

What fraction of the way to B is C? Can you explain your answer?

Apply different values for X. What do you notice?



Name:

Add and Subtract

Add two numbers.

Subtract the same two numbers.

The answers are 3.28 apart.

What could your numbers have been?

Name:

How Much is 10,000?

Draw a picture that represents how much 10,000 is.
Explain why your picture makes that amount clear.

Name:

Multiplying Two by Two

You model how to multiply two 2-digit numbers by using 32 base ten blocks.

What numbers could you be multiplying?

Show your working.

What is the product of these numbers?

Can you find more possibilities?

Name:

Moving Around

Start at the bottom left corner of the grid.

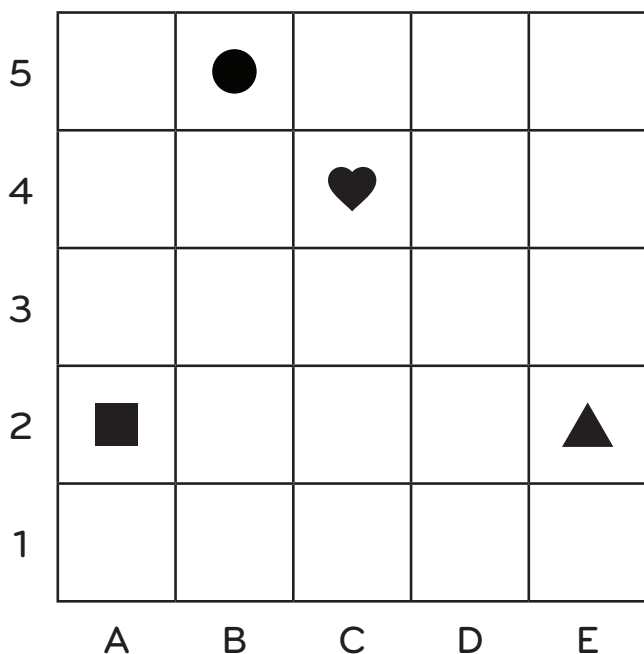
Describe a path of single-square moves, right, left, up or down, you would have to make to collect all four objects. How many moves long is your path?

Now place two more objects on the grid so that it takes a total of 15 single-square moves to collect all 6 objects, still starting at the bottom left corner.

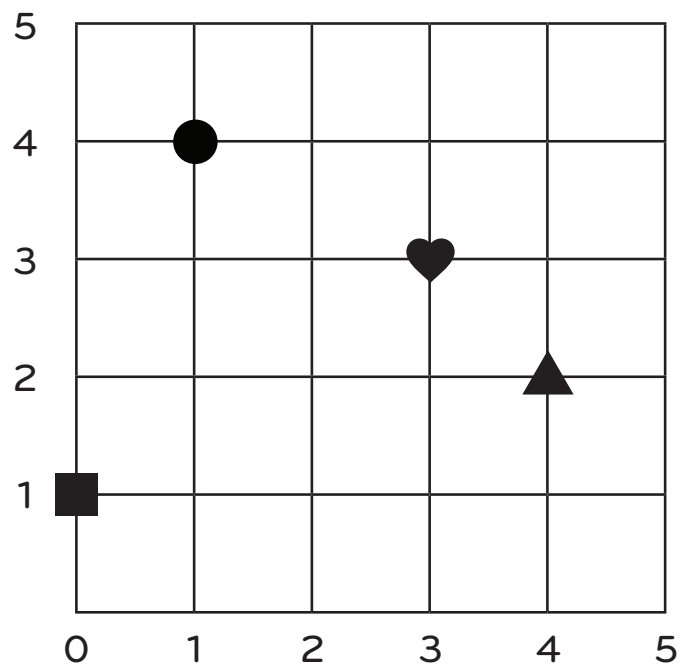
Describe the 15-move path, starting at the bottom left corner.

Use either Grid 1 or Grid 2.

GRID 1



GRID 2



Name:

Two Points

The two dark dots shown could be part of one or two edges or could be vertices of the shape you see after you reflect a triangle using a mirror. If you reflect a triangle using a mirror, the two dark dots shown could either be vertices, or part of one or two edges of the reflected shape.

Draw the original triangle, the reflection line, and the reflected shape that the dots are part of.

Try different possibilities.



Name:

Three Cuboids

A short, medium, and tall cuboid, together, have a total volume of 80 cubic units.

What might be the length, width, and height of each?

Think of a number of possibilities.

Name:

Big and Little Rectangles

The area of one rectangle is $2\frac{1}{2}$ times as big as the area of another.

What could the original and new lengths and widths be?

Show at least three possibilities starting with the same small rectangle.

Can you do the same thing if you start with a different small rectangle?

Name:

Related Patterns

Pattern 1: 3, 6, 9, 12, ...

Pattern 2: 11, 21, 31, 41, ...

Numbers in patterns are called terms. The terms in the patterns are called "matching" if they are both at the same position in the pattern, e.g. 3 and 11 are matching terms because they are both in position one.

Draw a picture that shows that every term in pattern 2 is one more than $3\frac{1}{3}$ lots of the matching term in pattern 1.

Explain how your picture shows this.

Name:

Data

Spin Red, Green, and Blue

On a spinner, you are twice as likely to get red as blue, and half as likely to get blue as green.

What could the spinner look like? Make it using a spinner and red, blue and green labels.

Test to see if you are right by spinning 10 times to see what happens.

Is there more than one possibility? Explain.