

# Investigation 1.1 A → D

- $x, y$
- A<sub>1</sub>) gas station ( , )  
 A<sub>2</sub>) animal shelter ( , )  
 A<sub>3</sub>) stadium ( , )

B<sub>1</sub>) Police station → City Hall

total Distance  
B<sub>2</sub>)

Hospital → City Hall

Hospital → Art Museum

- C<sub>1</sub>) The shortest distance in blocks is  
 I can figure this out without looking at  
 the grid by...

C<sub>2</sub>) If two coordinates are known, the shortest driving distance between them can be determined by...

D<sub>1</sub>) Police station  $\rightarrow$  City Hall  $\approx$                       blocks  
Hospital  $\rightarrow$  City Hall  $\approx$                                       blocks  
Hospital  $\rightarrow$  Art Museum  $\approx$                                 blocks

D<sub>2</sub>) A direct helicopter route will/not always be shorter than a car route. I think this because...

## Investigation 1.3 A,C

The horizontal ( $\leftrightarrow$ ) and vertical ( $\updownarrow$ ) distance between two dots is 1 unit long.

A) Find the area of each figure.

1)

2)

3)

4)

5)

6)

7)

8)

9)

10)

C) The strategies I used to find the area are...

## Investigation 2.1 Class Activity

On a 5 dot by 5 dot grid, draw as many squares with different areas as possible. Include at least two squares whose sides are not horizontal and vertical.

Fill in the table below, starting with your smallest area.

Square	Area	Side Length
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A

B

C

D

Investigation 2.2 A, B<sub>1-3</sub>

A <sub>1</sub> ) Areas	Side Lengths
1	
9	
16	
25	

A <sub>2</sub> )	
$\sqrt{1}$	=
$\sqrt{9}$	=
$\sqrt{16}$	=
$\sqrt{25}$	=

B<sub>1</sub>) A square with the side length of 12 has an area of...

A square with the side lengths of 2.5 units has an area of...

B<sub>2</sub>)  $\sqrt{\quad} = 12$

$\sqrt{\quad} = 2.5$

B<sub>3</sub>) Solve for x

a)  $x^2 = 121$      $x =$

b)  $x^2 = 2.25$      $x =$

c)  $\sqrt{x} = 121$      $x =$

d)  $\sqrt{2.25} = x$      $x =$