There are 9 rectangles (including squares) in this 2 × 2 grid.

```
  |   |
--+---
  |   |
```

How many rectangles (including squares) are there in this 3 × 3 grid?

```
  |   |   |
--+---+---
  |   |   |
  |   |   |
```

36 rectangles (including squares)

\(3 + 6 = 9\)

Discover the smallest square number that can be written using five different Roman numerals.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>1</td>
</tr>
<tr>
<td>V</td>
<td>5</td>
</tr>
<tr>
<td>X</td>
<td>10</td>
</tr>
<tr>
<td>L</td>
<td>50</td>
</tr>
<tr>
<td>C</td>
<td>100</td>
</tr>
<tr>
<td>D</td>
<td>500</td>
</tr>
<tr>
<td>M</td>
<td>1000</td>
</tr>
</tbody>
</table>

\(CXLIV = 144\)

\(144 \div 24 = 6\)
**Escape the Room**  Answers for Digit 3

How many more squares need to be shaded in so that \( \frac{3}{4} \) of the grid is shaded?

![Grid with shaded squares]

Add together the digits of this answer to give you the third digit of the keypad code.

\[ 11 \]

\[ 1 + 1 = 2 \]

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**Escape the Room**  Answers for Digit 4

Use the clues to calculate the mystery number.

- Rounded to the nearest ten, the number is 61 460.
- The number is divisible by 4.
- The digit sum is even.

What is the number?

61456  \[ 6 + 1 + 4 + 5 + 6 = 22 \]

\[ 2 + 2 = 4 \]
**Escape the Room**  
**Answers for Digit 5**

Here is a line graph showing the length of a shadow measured over time.

- At its shortest length, the shadow measured 40cm.
- At its longest length, the shadow measured 240cm.
- What was the length of the shadow at hour 7?

The tens digit of this answer will give you the fifth digit of the keypad code.

**Escape the Room**  
**Answers for Digit 6**

Work out the rule for each number sequence and find the next five numbers in each sequence.

1. 1250, 1350, 1450, 1550, 1650, **1750**, 1850
2. 6750, 5750, 4750, 3750, 2750, **1750**, 750
3. 1810, 1800, **1790**, 1780, 1770, 1760, **1750**

Which number is common to each of the number sequences?

Add together the digits of this answer to give you the sixth digit of the keypad code.

1750  \[1 + 7 + 5 + 0 = 13\]
\[1 + 3 = 4\]
**Escape the Room**

**Answers for Digit 7**

Use the clues to calculate the mystery two-digit number that is less than 50.

- It is one more than a prime number.
- The sum of its digits is a square number.

Add together the digits of this answer to give you the seventh digit of the keypad code.

\[18\]
\[1 + 8 = 9\]

**Escape the Room**

**Answers for Digit 8**

Use the clues to calculate the mystery five-digit number.

- The digits of the hundreds and ones total 12.
- It has two more ones than hundreds.
- It has one less ten thousand than ones.
- The digits of the thousands and hundreds total the same digit as the number of ten thousands.
- It has a digit sum of 22.

The tens digit of this answer will give you the eighth digit of the keypad code.

\[61537\]
\[3\]
Add together the digits of this answer to give you the ninth digit of the keypad code. 

43 appears twice.

\[ 4 + 3 = 7 \]

This answer will give you the tenth digit of the keypad code.

\[ 9 \]