|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| V | H | Z | L | H | Row 1 |
| P | C | O | E | X |
| V | F | J | Q | C |
| Q | C | O | T | Z |
| X | F | V | Z | T |
| U | N | R | Z | L |
| A | M | E | P | D |
| M | B | G | V | G |
| D | U | Y | R | V |
| W | P | V | L | K |
| A | J | R | M | G |
| T | Y | O | J | J |
| Y | V | X | H | H |
| Y | K | P | N | V |
| U | Z | K | V | J | Row 2 |
| U | T | L | L | O |
| E | W | P | X | J |
| T | B | S | J | B |
| H | I | G | M | L |
| X | W | I | X | Y |
| W | A | H | T | V |
| S | K | N | U | M |
| F | A | S | R | G |
| A | Y | P | S | L |
| Y | G | M | Z | R |
| W | G | Z | M | G |
| R | G | B | G | V |
| A | C | R | N | K |
| R | H | Z | Y | K | Row 3 |
| P | N | V | U | Z |
| K | V | J | U | T |
| L | L | F | V | J |
| B | M | I | R | N |
| X | U | X | N | T |
| K | A | E | V | V |
| B | S | W | W | D |
| X | L | G | G | F |
| G | A | L | V | R |
| K | W | G | X | L |
| P | P | P | I | A |
| B | V | R | U | A |
| V | O | M | Y | J |
| V | W | S | I | R |
| E | X | M | A | Z | Row 4 |
| U | U | W | S | W |
| U | I | N | T | F |
| K | A | B | Z | Y |
| S | R | U | V | Y |
| K | G | R | I | F |
| H | P | K | O | R |
| Y | S | N | J | V |
| K | T | Z | B | R |
| V | G | Y | B | U |
| X | V | Y | V | M |
| T | X | H | E | O |
| Z | Y | T | I | I |
| X | F | N | I | E |
| S | R | H | Y | X | Row 5 |
| N | I | I | Z | K |
| R | F | Y | I | T |
| D | F | Y | V | Z |
| F | R | F | O | T |
| X | B | T | S | F |
| Y | A | L | V | F |
| Y | Z | V | X | N |
| W | X | G | I | A |
| I | N | W | F | G |
| V | T | Q | H | Z |
| K | K | H | G | R |
| Z | O | S | A | L |
| N | T | O | Y | G |
| T | M | M | Q | R |
| F | U | X | Q | F | Row 6 |
| O | X | X | Z | Y |
| J | R | N | X | B |
| L | Y | P | N | R |
| B | R | Q | M | S |
| N | F | A | B | E |
| V | B | K | L | B |
| Q | D | N | B | M |
| R | L | U | D | Y |
| S | N | G | P | Z |
| W | F | N | Q | X |
| R | H | B | Z | H |
| U | F | R | P | U |
| X | B | U | Y | T |
| V | G | H | J | M | Row 7 |
| M | I | Z | F | B |
| N | P | A | W | E |
| M | L | V | T | R |
| Z | X | R | W | V |
| A | D | F | Y | O |
| Z | D | X | Z | K |
| P | M | F | V | G |
| J | X | J | S | E |
| Q | R | E | A | W |
| M | K | Q | L | C |
| G | X | M | S | M |
| W | L | M | M | O |
| S | C | H | U | H | Row 8 |
| F | A | C | F | R |
| L | N | U | Y | S |
| L | P | M | J | R |
| K | Z | M | I | C |
| E | T | F | K | T |
| E | E | P | O | S |
| S | L | I | X | S |
| C | N | S | W | M |
| G | V | K | I | L |
| C | N | F | C | R |
| H | W | E | V | X |
| I | G | X | Y | P |
| P | M | L | G | G |
| O | L | I | W | M | Row 9 |
| M | F | R | X | F |
| B | U | X | Z | A |
| D | I | Y | E | C |
| I | O | L | W | R |
| K | J | Q | D | A |
| B | M | C | R | P |
| I | B | A | E | Z |
| A | C | L | V | Z |
| B | G | C | R | C |
| A | B | Z | P | C |
| A | O | X | L | P |
| S | R | N | A | L |
| F | E | S | X | L |
| P | U | U | K | Z |
| F | R | B | J | T | Row 10 |
| I | G | L | N | A |
| R | R | V | M | H |
| M | C | R | N | E |
| A | W | U | E | M |
| S | L | N | B | Z |
| V | V | H | W | K |
| R | F | C | E | M |
| O | I | T | N | Z |
| E | O | B | F | K |
| D | G | Y | F | W |
| A | X | Y | W | A |
| H | T | V | S | K |
| T | P | V | W | B |
| B | G | R | U | U | Row 11 |
| U | O | B | O | C |
| W | I | P | L | X |
| B | P | Y | S | T |
| V | L | P | K | Z |
| A | D | Q | N | M |
|  |  |  |  |  |
| Y | T | S | Y | F |

IT IS ALL BUT IMPOSSIBLE TO DRAW A DISTINCTION BETWEEN BLETCHLEY PARKS WORK ON WARTIME GERMANY AND ITS GROWING WORK ON THE SOVIET UNION IN THE NINETEEN FORTIES KNOWLEDGE OF WARTIME GERMANY REQUIRED THE TRACKING OF EVENTS ON THE EASTERN FRONT AND INVOLVED LEARNING AS MUCH AS POSSIBLE ABOUT THE SOVIET EFFORT BRITISH INTELLIGENCE BEGAN TO VALUE THE GERMANS FOR THEIR KNOWLEDGE OF THE SOVIET UNION AS SOON AS ULTRA CAME ON STREAM GERMAN MESSAGES USED TO SEND THEIR OWN SIGINT SUMMARIES ABOUT THE SOVIET UNION BACK TO BERLIN WERE IN TURN INTERCEPTED BY THE BRITISH THIS SECOND HAND SIGNIT PROVED TO BE LONDONS BEST SOURCE ON THE PERFORMANCE OF SOVIET FORCES AS EARLY AS NINETEEN FORTY THREE THE JOINT INTELLIGENCE COMMITTEE BRITAINS HIGHEST INTELLIGENCE AUTHORITY WAS ABLE TO PRODUCE DETAILED AND ACCURATE REPORTS ON THE CAPABILITIES OF THE SOVIET AIR FORCE BASED UPON LUFTWAFFE SIGINT MATERIAL