**Dinky King 3 – Properties In Numberland**

The game designers behind the Dinky King series have come up with a new concept: Dinky King has kidnapped the princess once more and Murrio is intent on saving her. The game designers want Murrio to pick his way through various rooms using number facts along a central path.

The rooms are called:

*Multiple Madness*

*Factors Fiasco*

*Square Squashers*

*Cube Conundrums*

*Triangular Tribulations*

*Powers Problems*

Can you check that the programmers have done the paths correctly by colouring in the correct pathway for each room?

**Multiple Madness:**

*Instructions - pick out the multiples of the number at the top of each column*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Multiple of: | 5 | 3 | 7 | 8 | 9 | 4 | 12 | 15 |
|  | 24 | 23 | 27 | 72 | 235 | 88 | 600 | 455 |
| 45 | 43 | 101 | 100 | 245 | 82 | 102 | 1515 |
| 51 | 36 | 42 | 106 | 225 | 86 | 244 | 350 |

**Factors Fiasco:**

*Instructions - pick out the factors of the number at the top of each column*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Factor of: | 15 | 12 | 24 | 32 | 100 | 125 | 180 | 300 |
|  | 3 | 8 | 14 | 16 | 15 | 50 | 60 | 70 |
| 7 | 3 | 8 | 12 | 40 | 25 | 40 | 75 |
| 10 | 5 | 7 | 6 | 25 | 62.5 | 50 | 65 |

**Square Squashers:**

*Instructions - pick out the square numbers*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2 | 9 | 32 | 5 | 81 | 144 | 200 | 165 |
| 4 | 20 | 36 | 3 | 90 | 133 | 250 | 169 |
| 10 | 12 | 38 | 1 | 84 | 150 | 225 | 167 |

**Cube Conundrums:**

*Instructions – pick out the cube numbers*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 8 | 25 | 1 | 125 | 60 | 216 | 900 | 810 |
| 6 | 27 | 2 | 120 | 72 | 203 | 1200 | 900 |
| 3 | 18 | 3 | 124 | 64 | 240 | 1000 | 729 |

**Triangular Tribulations:**

*Instructions – pick out the triangular numbers*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 3 | 10 | 16 | 9 | 19 | 57 | 33 | 28 |
| 2 | 12 | 18 | 6 | 21 | 55 | 35 | 26 |
| 5 | 13 | 15 | 7 | 23 | 50 | 36 | 27 |

**Powers Problems:**

*Instructions - pick out the powers of the number at the top of each column*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Power of: | 2 | 5 | 1 | 3 | 10 | 2 | 5 | 100 |
|  | 20 | 125 | 2 | 30 | 10,000 | 108 | 1500 | 10,000 |
| 32 | 10 | 1 | 81 | 500 | 200 | 3125 | 1000 |
| 24 | 105 | 5 | 63 | 1010 | 128 | 2250 | 100,000 |

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Dinky King with the Princess