**Dinky King 6 – New Points Systems**

The makers of the highly successful series of games “Dinky King” are trying to freshen the game up by introducing a new points scoring system. Can you help them test their new systems and devise a rule or formula for each points scoring scenario?

*Collecting Stars:*

As you know, Murrio collects stars on his way to saving the damsel in distress. The game designers have decided that Murrio gains 10 points for his first star and 5 points for every star he collects after that.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Stars | 1 | 2 | 3 | 4 | 5 |
| Points | 10 | 15 | 20 | 25 | 30 |

There are 50 stars of the first level of Dinky King 6, how many points would that be? (Make sure you explain how you worked it out for the designers.)



255 (Rule: 5n + 5)



50 Stars = ……………………………………………………………… points

*Jumping Barrels:*

Murrio has to jump over barrels rolled down the platforms by Dinky King. The game designers have decided to award 15 points for the first barrel Murrio jumps and 8 points for each barrel he jumps over after that.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Barrels | 1 | 2 | 3 | 4 | 5 |
| Points | 15 | 23 | 31 | 39 | 47 |

Theer are 25 barrels on the first level of the new game, how many points would that be? (Again, please explain to the designers how you worked it all out.)



207 (Rule: 8n + 7)

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25 barrels = ……………………………………………………………… points

*Completing Levels:*

The players are going to receive points for completing each level, with 200 points for the first levels and then increasing by 25 each time.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Level | 1 | 2 | 3 | 4 | 5 |
| Points | 200 | 225 | 250 | 275 | 300 |

There are going to be 100 levels in Dinky King 6, so how many points would you get for completing the final level? (The designers still need an explanation!)



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2675 (Rule: 25n + 175)

100th Level = ……………………………………………………………… points

*Time To Complete Level:*

The designers want to reward the players for completing each level in the quickest possible time with bonus points. They have decided to say that after 1 second you could have 5000 points, but it goes down by 20 points for every extra second it takes to complete that level.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Time Taken | 1 | 2 | 3 | 4 | 5 |
| Points | 5000 | 4980 | 4960 | 4940 | 4920 |

The designer says that the first level should take about 40 seconds, so how many bonus points would you get if you did complete it in that time? (Explanation please!)

4220 (Rule: 5020 – 20n)

40 seconds = ………………………………………………………………points

