Grade 7

Extra Challenges - Set V

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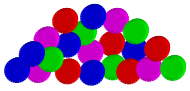
1. When Shaw last turned off his iPod it had $\frac{1}{3}$ of its battery life left. The next day he turned it on again and listened to music while going for a run. When he finally turned it off, it had 10% of its battery life left. Approximately how long was Shaw's run, if his iPod has an average of two hours of battery life?

2. The pattern of four figures is repeated as shown ♦ ♠ ♥ ♣ ♦ ♠ ♥ ♣ ♦ ♠....
What is the 115th symbol in the pattern?

3. A rectangle has an area of 48 cm^2. The side lengths of the rectangle are integers. What is the minimum possible perimeter of the rectangle?

4. Alexis skates around a hockey rink in forty seconds. Her friend, Emily, skates in the opposite direction of Alexis. The two girls meet every fifteen seconds. How long does it take Emily to skate around the rink?

5. A box contains 12 blue marbles, 18 red marbles, 11 green marbles, and 19 pink marbles.
   a. If you take one marble out of the box, without looking, what is the probability you will get a pink marble?
   b. What is the probability you will get a red or a blue marble?



Did You Know?

In a group of at least 23 people the probability of two people sharing the same birthday is at least 50%.

Don't forget to try these past contests! Go to www.wiredmath.ca for the link.

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Past Gauss Contests

http://www.cemc.uwaterloo.ca/contests/past_contests.html#gauss