Name: _____   Date: _____

Winter Olympics Math Questions

1. The members of a bobsleigh team want to increase their speed by 10% on their second run. If their speed for the first run is about 80 mph, what is their approximate speed they are attempting to achieve on the second run?

2. Lee is skating in the men's 10,000 m speed skating event, which is completed by skating 25 laps on a speed skating oval. If Lee completes 5 laps in 2 minutes and 45 seconds, about how long will it take him to finish all 25 laps, assuming that his speed remains constant for the rest of the race?

3. In the halfpipe snowboarding event, six judges evaluate each participant. Of these six scores, the highest and lowest are dropped, and the remaining four are averaged. If the following represent the six scores of the judges, what is the final score for the participant, rounded to two decimal places?

    94.8 96.3 90.2 91.5 95.1 93.5

4. In curling, each team throws 8 stones in total. If a team has thrown 2 stones, what fraction of the team's total stones have they thrown? Be sure to write your fraction in lowest terms.

5. Hayley has taken 32 shots on net during her hockey game. If she scores 2 goals, what is her shooting percentage for this game?

6. Shawn is competing in the biathlon event, which includes cross-country skiing and rifle shooting. For this event, the athlete shoots at a total of 20 targets, and each missed target results in the addition of 1 minute to their time. If Shawn's previous competitor just finished the course in a time of $54\frac{1}{2}$ minutes, but missed 6 targets, what total time must Shawn achieve to beat his competitor?

7. A long track speed skater has completed 8 laps in 4 minutes. If her speed was about constant, what is her time per lap?

8. The neutral zone of an Olympic ice hockey rink is about 100 ft by 58 ft. The face-off circle at its center is about 30 ft in diameter. What is the area of ice in the neutral zone, excluding the face-off circle? Approximate π with 3.14 and round your answer to the nearest foot.

9. A cross-country skier is practicing the course for her upcoming race. She notices the changes in elevation as she goes. There is a hill with a gain of 14.5 m in elevation, then a fairly flat section. Next there is a long, gradual downhill section with a 25 m drop in elevation, and then another flat section. Finally, there is another uphill section with 8.5 m gain in elevation. What is the overall change in elevation for the course?

10. Valerie is competing in the ski jump event on the normal hill. Her goal is to jump 95 m. If she only achieves 90% of this distance, how far did she jump?