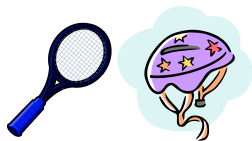


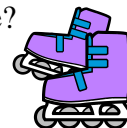
Grade 9

EXTRA CHALLENGES - SET VI

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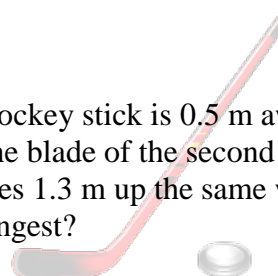


1. A sports store employs twenty-five people. There are seven more full-time staff than the number of part-time staff. How many people work part-time?



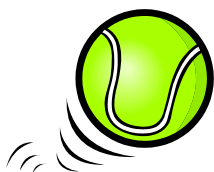
2. Danielle drove at an average speed of 50 km/h from Waterloo to Cambridge. From Cambridge to Ottawa she drove at an average speed of 100 km/h. The whole trip was 550 km and took 6 hours. How far is it from Cambridge to Ottawa, in kilometres?

3. Two hockey sticks are leaning against a wall. The blade of the first hockey stick is 0.5 m away from the base of the wall and the top of the stick reaches 1.1 m up the wall. The blade of the second hockey stick is 0.8 m away from the base of the wall and the top of the stick reaches 1.3 m up the same wall. If the blades of each hockey stick are 38 cm in length, which stick is the longest?



Did You Know?

The Bermuda Triangle covers about 1,300,000 km² of the Atlantic Ocean.



4. The velocity, V , in metres per second, of a tennis ball thrown upwards is modelled by the equation $V = 17 - 5t$ where t is time in seconds. After how many seconds will the tennis ball reach its maximum height?

5. A cylindrical tank is to be built to hold a maximum of 12 700 m³ of water.
- If the height of the tank is 18 m and the diameter is 20 m, will the tank hold the water? Explain.
 - If the height of the tank is 18 m. To the nearest metre, what should the diameter of the cylindrical tank be to hold a maximum of 12 700 m³ of water?

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



TRY THESE!

Past Pascal Contests

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

Past Fryer Contests

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