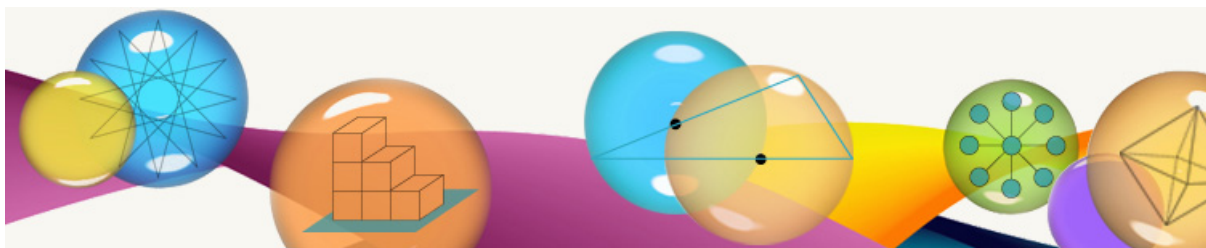


Problem of the Week



Problem A Blind Soccer (Grade 3 / 4)

Blind people play soccer in the Paralympics. Blind soccer is just like soccer for the sighted, except that each half lasts 25 minutes, rather than 45 minutes. Jordan plays blind soccer on the Screaming Eagles team. In order to win a match, Jordan's team must win 3 of 5 games. Her team won the match.

- What is the minimum number of minutes her team must play to win a match? How many hours is this?
- What is the maximum number of minutes her team could play to win a match?



Problem B Sh-Rinking (Grade 5 / 6)

Over the summer, Randy and Sarah have built the base for a rectangular outdoor skating rink which is 25 m by 10 m, surrounded by boards. Now it's winter, and time to make the rink!

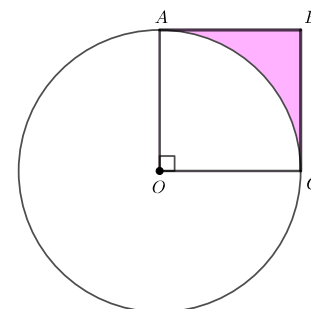
- How many litres of water will they need to fill the rink to a depth of 10 cm, assuming the ground is level?
- To resurface the rink, their Dad gets out his 4-wheeler and blade and scrapes off 3 mm of ice. What is the volume of ice removed?



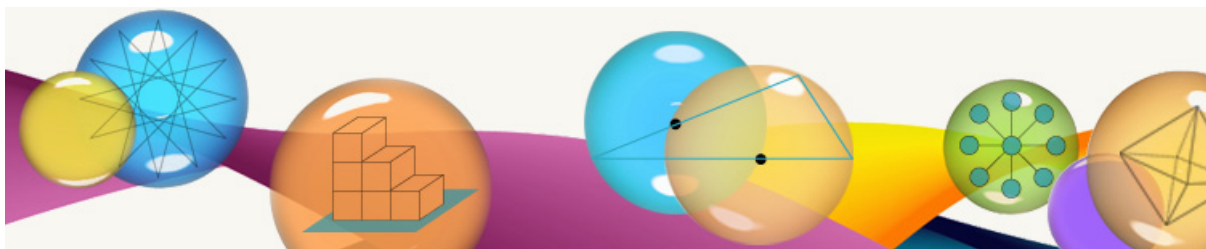
EXTENSION: In Science class, they learned that water expands by 9% when it freezes. How much less water would be needed so that the ice will still be 10 cm deep? (One way to find 9% of a number is to multiply the number by 9 and divide the product by 100.)

Problem C Both Inside and Out (Grade 7 / 8)

A and C lie on the circumference of the circle with centre O . $OABC$ is a square with area 16 cm^2 . Determine the area of the shaded region, accurate to two decimal places. That is, determine the area of the region inside square $OABC$ but outside the circle.



Problem of the Week



Problem A Stella's Vegetable Garden (Grade 3 / 4)

Stella wants to plant some vegetables in her garden so her family can enjoy them. She has five types of plants in the garden: beans, peas, carrots, lettuce, and tomatoes. She has four more bean plants than tomato plants. She has twice as many pea plants as lettuce plants. She has 10 fewer lettuce plants than carrot plants. She has the same number of bean plants as pea plants. Stella planted 16 carrot plants.



How many of each type of plant does Stella have in her garden?

Problem B Bookity-Book! (Grade 5 / 6)

Patrick is reading a book about forest animals. He has read $\frac{3}{4}$ of the 100 pages in his book. Nicholas has read $\frac{2}{3}$ of the 120 pages of his book about alpine flowers.

- Who has more pages left to read in his book?
- To finish his book, Patrick reads five full pages per day, every day. If Nicholas also reads a certain number of full pages every day, how many pages per day must he read in order to finish his book on the same day as Patrick finishes?



Problem C Just a Few More Marbles (Grade 7 / 8)

Mark has a bag that contains exactly 3 black marbles, 6 gold marbles, 2 purple marbles and 6 red marbles.

Mark finds a number of white marbles and adds them to the bag. He tells Sam that if she now draws a marble at random from the bag, the probability of it being black or gold is $\frac{3}{7}$. How many white marbles did Mark add to the bag?

