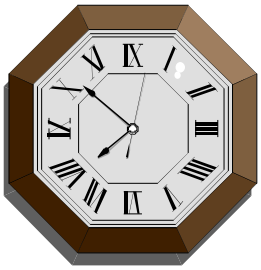
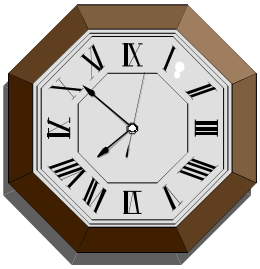
Problem of the Month



Once Upon a Time



Level A:

When it is four o'clock, how many minutes must pass before the big hand (minute hand) gets to where the little hand (hour hand) was at four o'clock?

How did you figure it out?

When it is six-thirty, how many minutes must pass before the big hand (minute hand) gets to where the little hand (hour hand) was at six-thirty?

Explain the way you figured it out.

Level B:

How old are you?

• State your answer in years.

• State your answer in seasons.

• State your answer in months.

• State your answer in weeks.

What date is it?

What number day of the year is it?

How many more days until January 1?

Level C:

I met a man who said, "If you can guess my age, I will pay you one dollar for each year that I have lived. I will also give you two hints. If you take my age and divide it by any odd number greater than 1 and less than 9, you will get a remainder of 1. But if you take my age and divide it by any even number greater than 1 and less than 9, you will not get a remainder of 1."

How much money could you earn?

Explain your solution and how you know it is the only correct answer.

Level D:

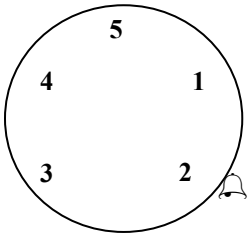
An eccentric clockmaker built three different clocks.

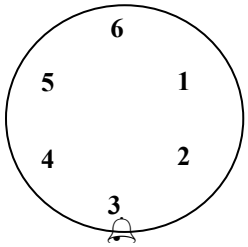
The first clock was a five-minute clock designed with an alarm set to sound each time the hand reached the number 2.

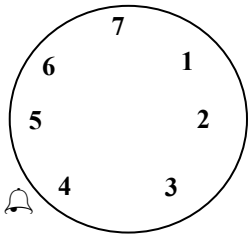
The second clock was a six-minute clock designed to sound each time the hand reached the number 3.

The third clock was a seven-minute clock designed to sound each time the hand reached the number 4.

The clockmaker started the clocks simultaneously one day, and each clock began to sound at its appropriate time. Was there a time when all three clocks sounded their alarms together? If so, tell when it occurred and explain why. If not, explain why not.







Level E:

The minute hand and the hour hand on a clock form a 48˚angle. What time is it?

At what other times during the day do the hands on the clock form a 48˚ angle?

How many times in a day (24 hour period) do the hands form a 48˚ angle? Explain your reasoning.