

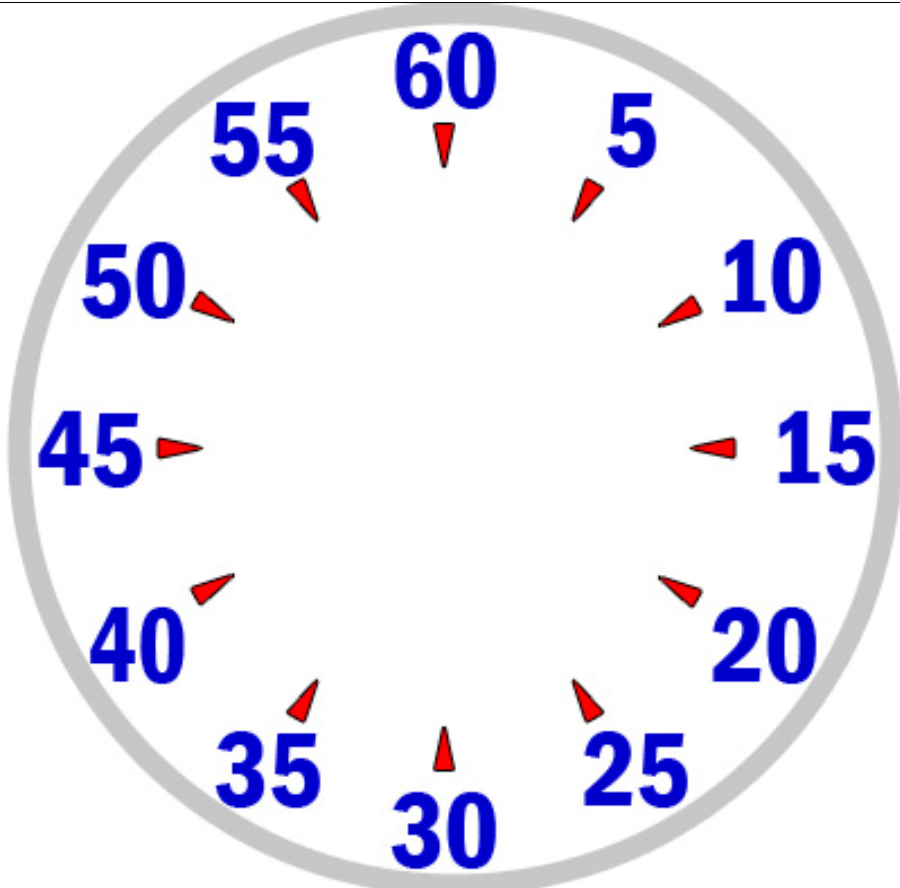
Coaches: Cut out these cards, bend them in half and test your swimmers on deck!!

Swimmers: Cut out these cards, bend them in half and test yourself. Draw the hands on the clock as you need to at home!

Good luck!!

-Coach Nate





SCENARIO #1:

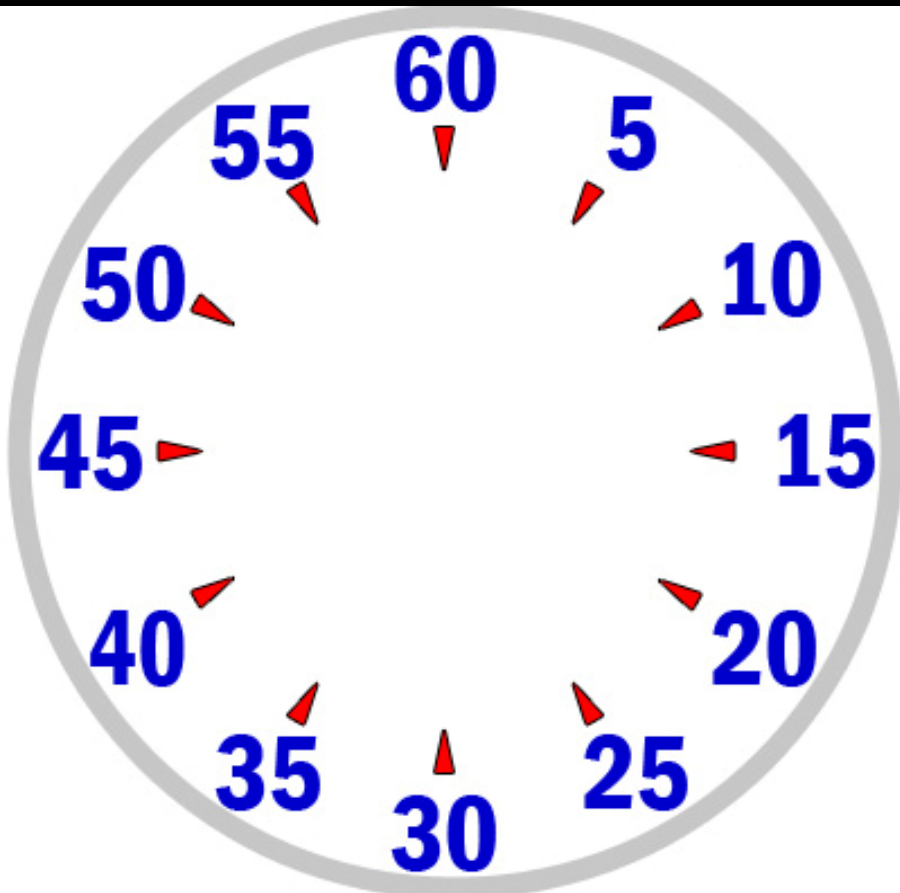
10 x 100 on 1:25

Coach sends your lane leader on the :30. You are 3rd in the lane going :05 apart.

QUESTION:

Where will the second hand be when you start #6?

BEND HERE



CLUE:

You would start the set on the :40.

You would depart for #2 on the :5.

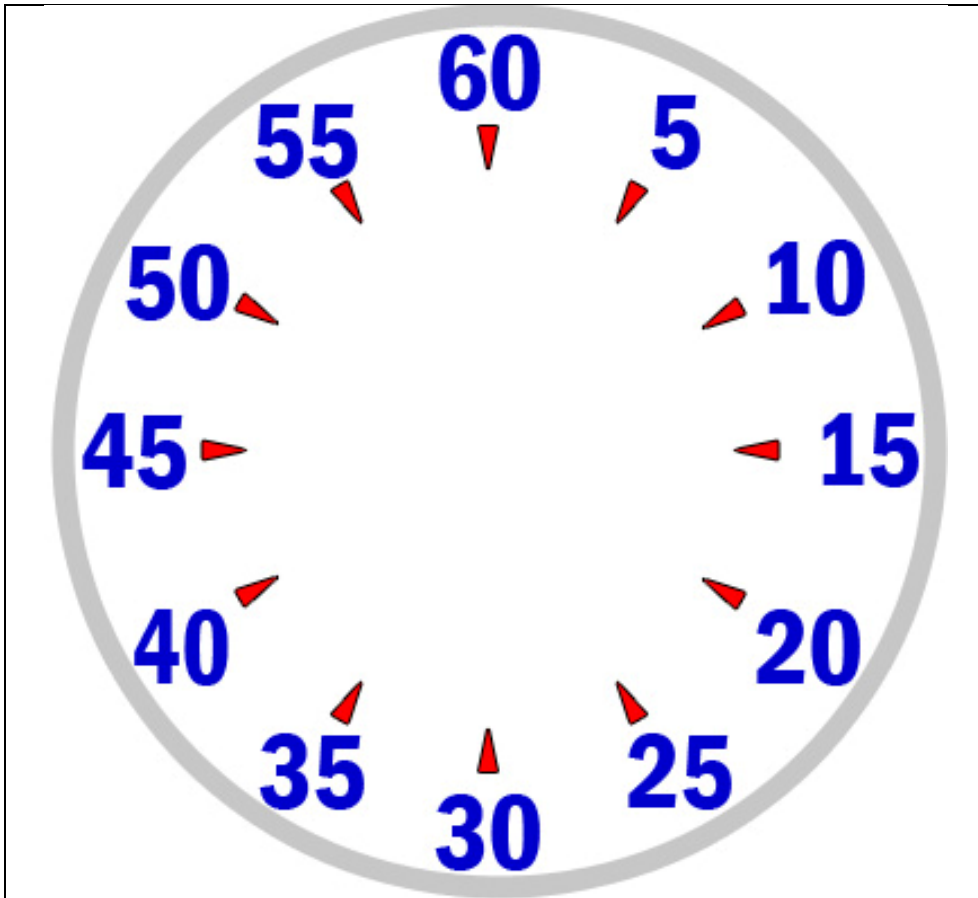
You would depart for #3 on the :30.

You would depart for #4 on the :55

You would depart for #5 on the :20

ANSWER:

You would depart for #6 on the :45



SCENARIO #2:

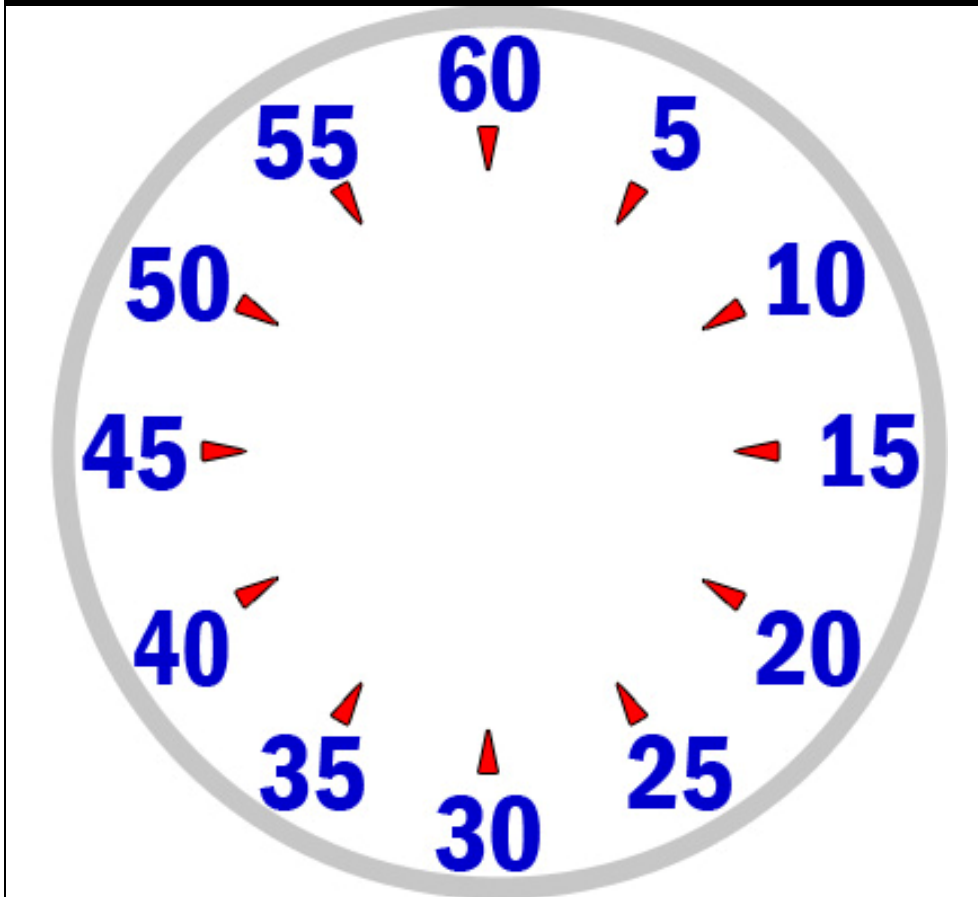
8 x 50 on :35
4 x 100 on 1:25

You start on the :15

QUESTION:

Where will the second hand be when you start the 100's?

BEND HERE



CLUE:

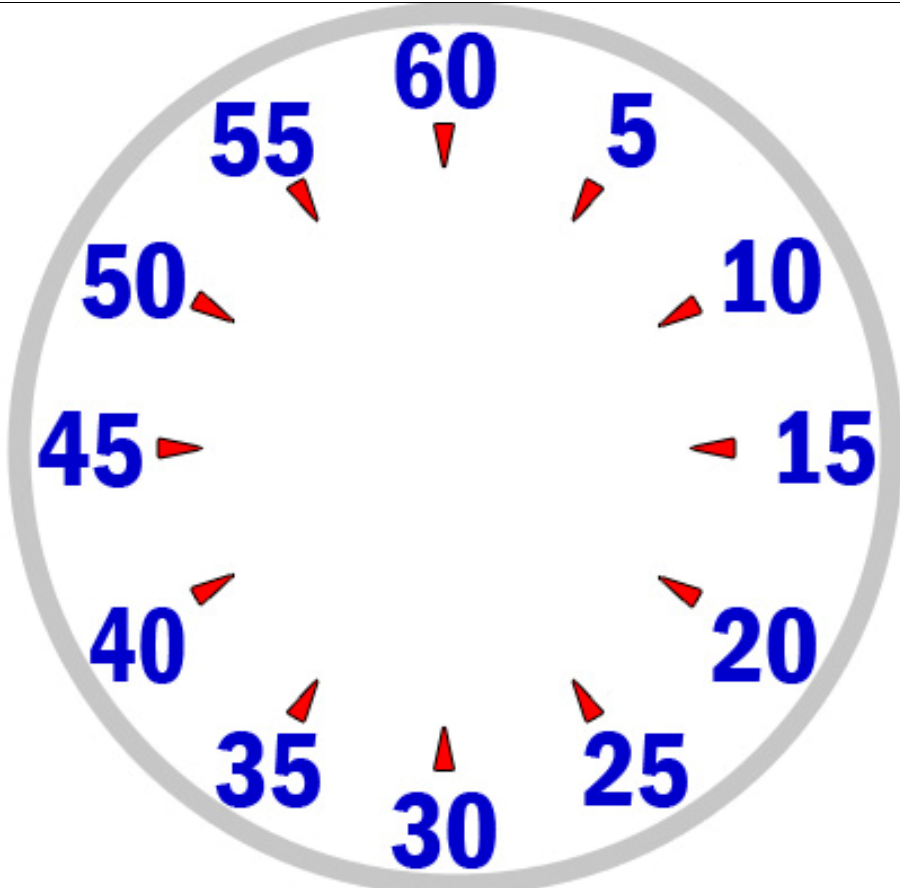
You would start the set on the :15

The departing interval will always be the opposite side of the last interval + :05

:15/:50/:25/:30/:5/:40/:15/:50/:55

ANSWER:

You would depart for the 4 x 100's on the :55



SCENARIO #3:

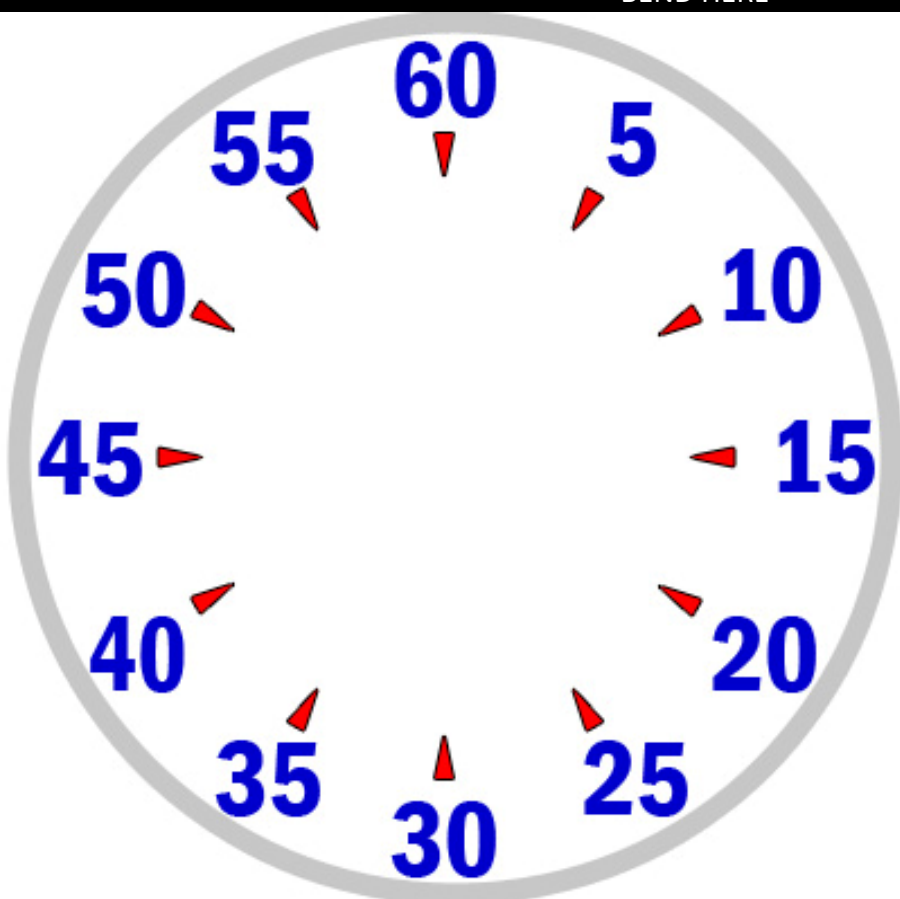
4 x 500 on 6:05
3 x 800 on 11:25

Your coach starts you on the top (:60).

QUESTION:

Where will the second hand be when you start the second 800?

BEND HERE



CLUE:

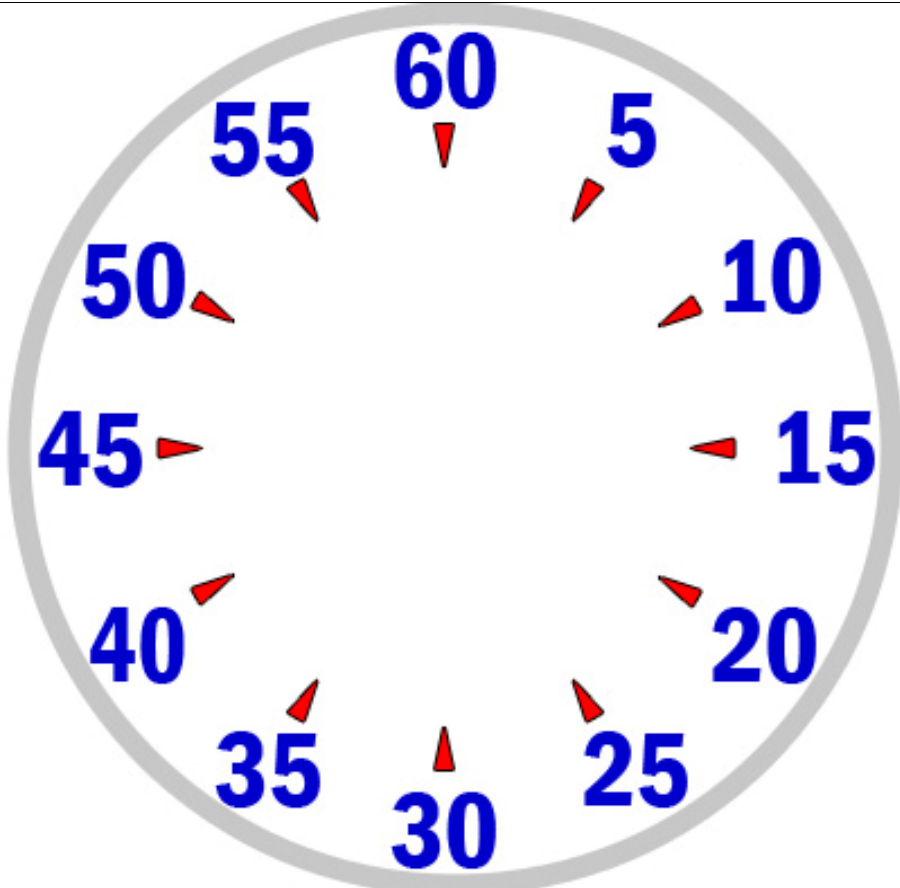
Minutes just get in the way of this easy one. Just use the seconds.

:05 multiples are always a breeze.
 $4 \times :05 = :20$

Add on :25 for the first 800 and you end up with :45

ANSWER:

You would start the second 800 on the :45



SCENARIO #4:

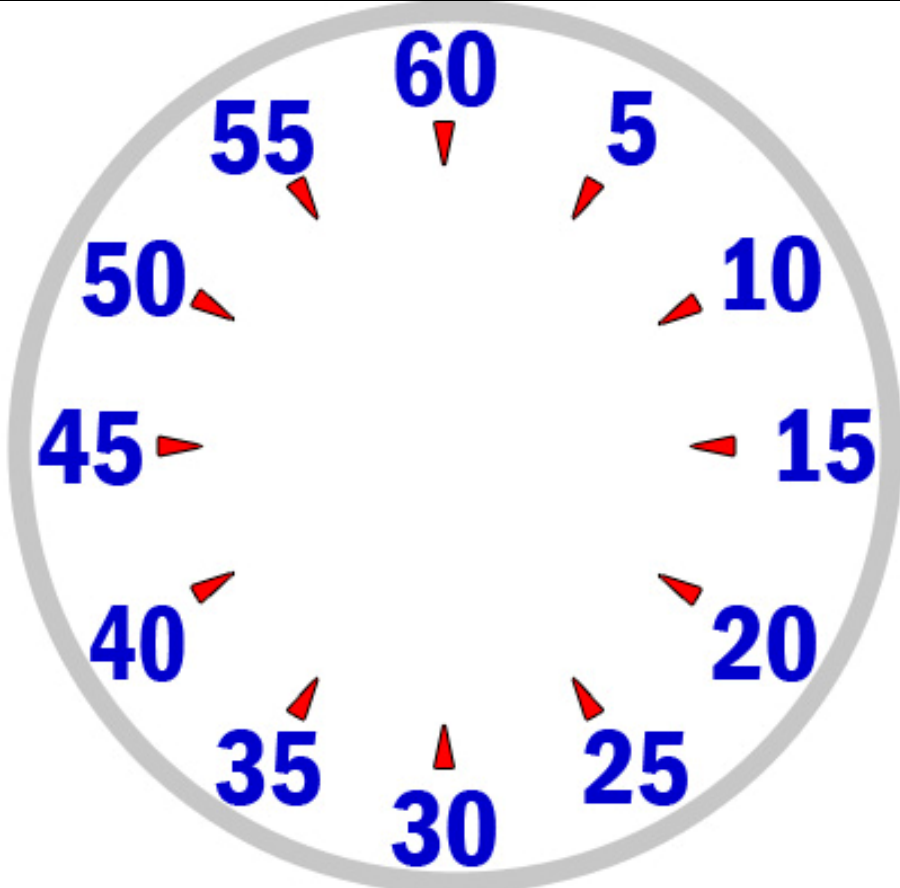
12 x 125
 1-3 are on 1:30
 4 is on 1:40

Your coach starts you on the :15

QUESTION:

Where will the second hand be when you start your last group of 4 x 125 (#9)?

BEND HERE



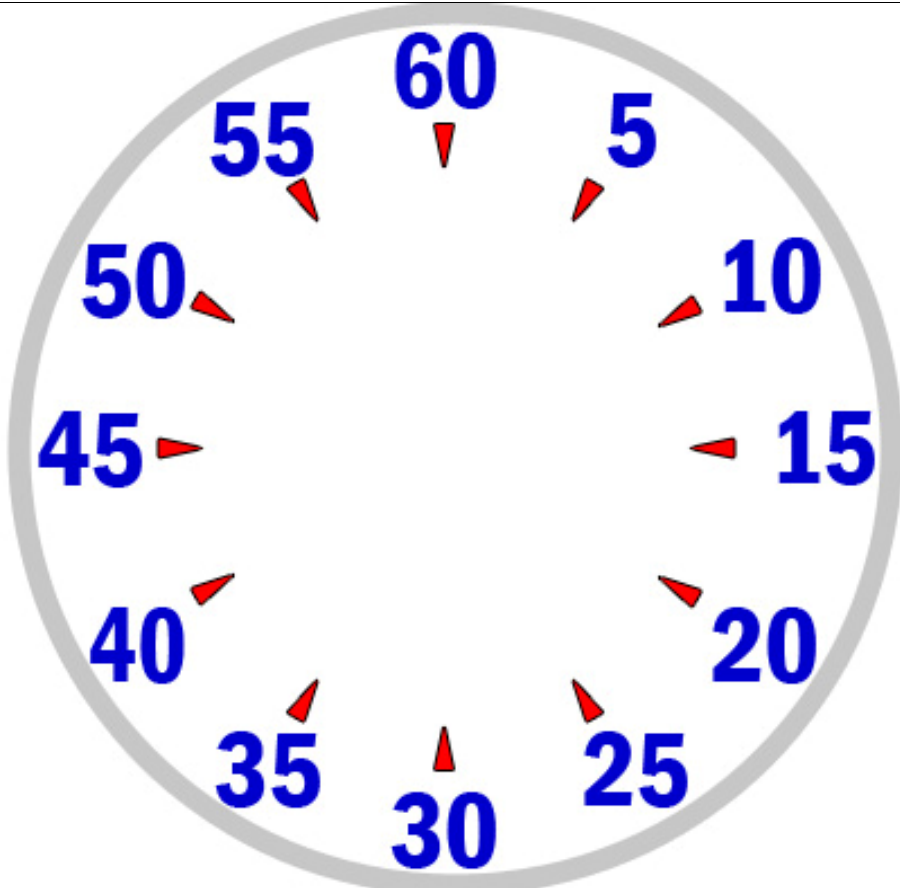
CLUE:

This would be easier if your coach started you on the top or bottom but they must have a logical reason.

The minutes are extraneous here so just do some quick math. You have 3 x :30 which puts you at the :45. (Any odd combinations of :30 always put you on the other side of the clock). Add another :40 and you are at the :25. After the first group of 4 you only added :10 to your starting point. Just add :10 again!

ANSWER:

You would start the 9th 125 on the :35



SCENARIO #5:

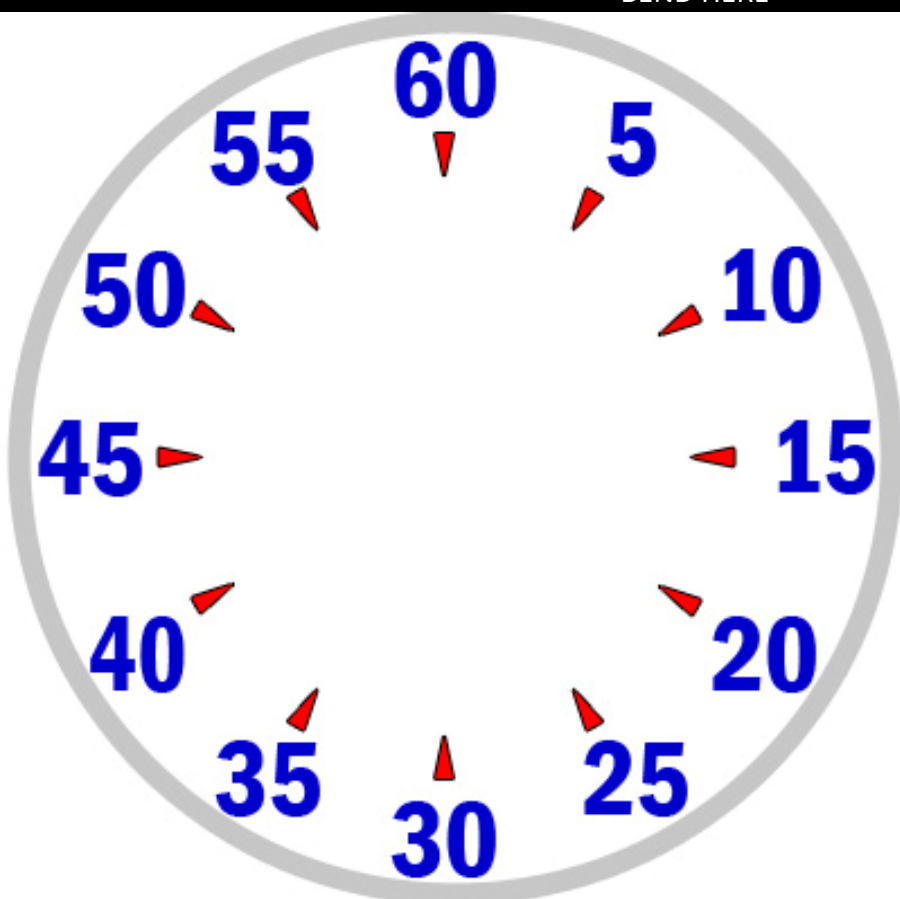
12 x 25 on :20
1 x 100 Max

Your coach starts you on the :25

QUESTION:

Where will the second hand be when you start your 100 max?

BEND HERE



CLUE:

:10's and :20's are awesome.

There are three :20's per minute.

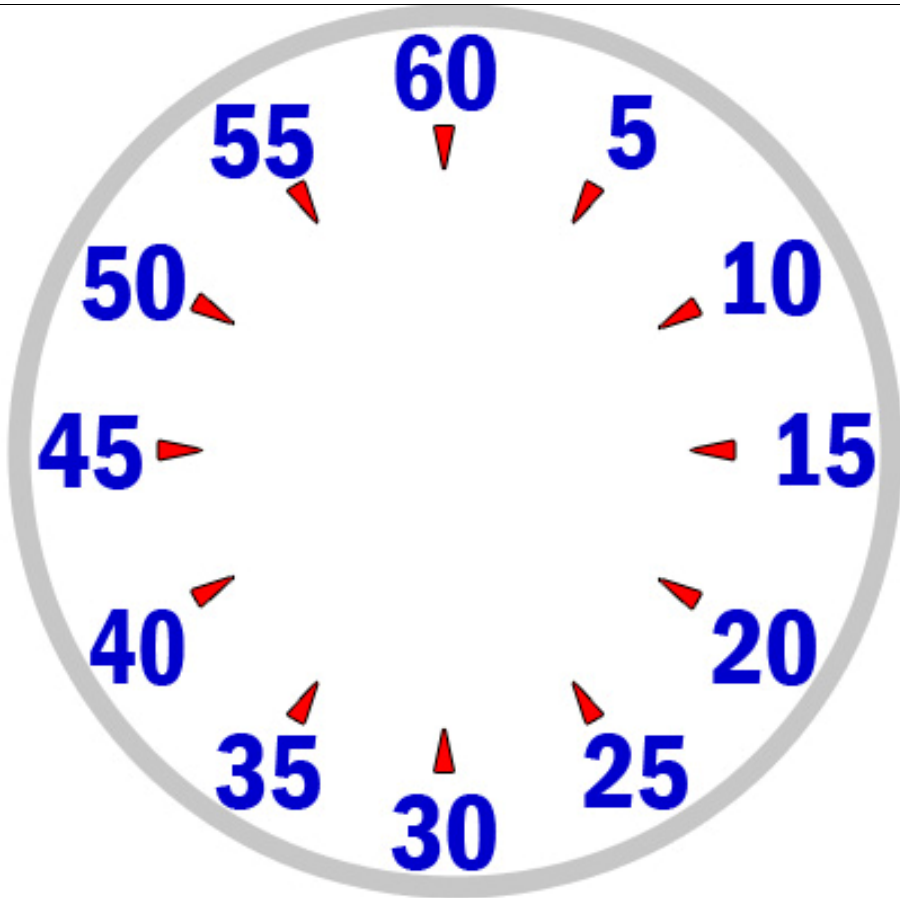
You have 12 x :20

$12/3 = 4$ (minutes)

No matter where you started, if you have a # of :20's that is divisible by 3, you will always start where you finished.

ANSWER:

You will start the 100 max on the :25



SCENARIO #6:

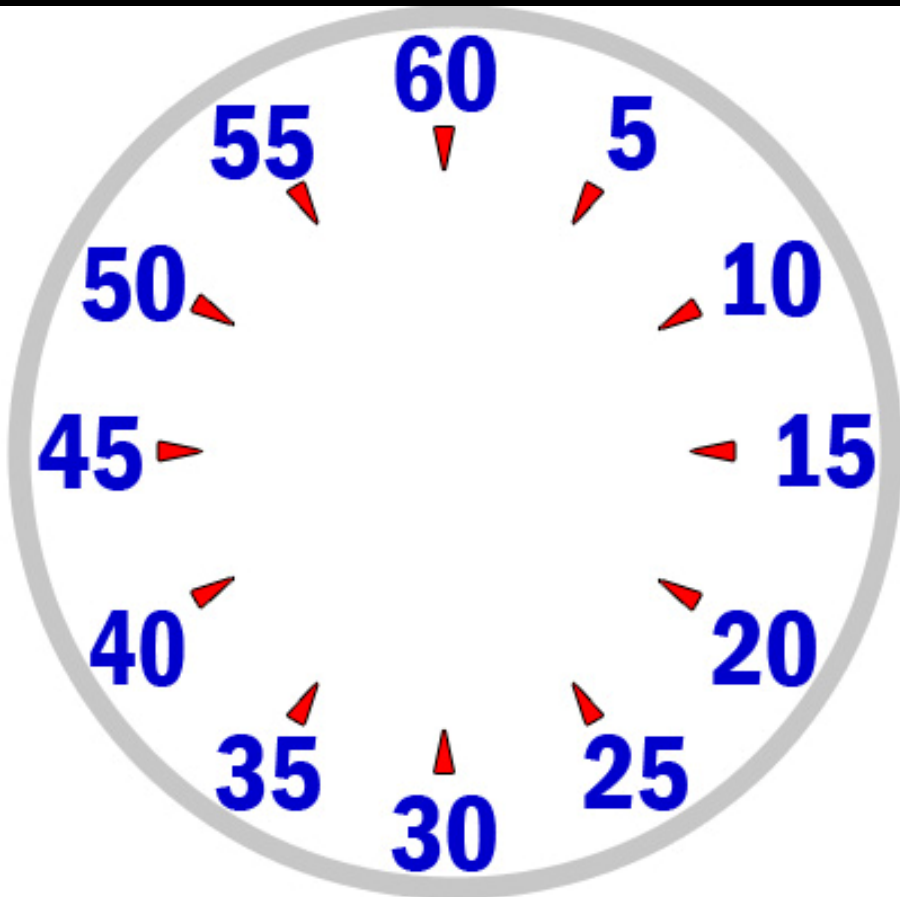
3 x 1600 on 19:35

Your coach starts you on the 8:30
(minute hand on 8, second hand
on :30)

QUESTION:

Where will the hands be when you
start #3

BEND HERE



CLUE:

Calculate the seconds first:
 $2 \times :35$ is 1:10

Then the minutes:
 $19 \times 2 = 38$

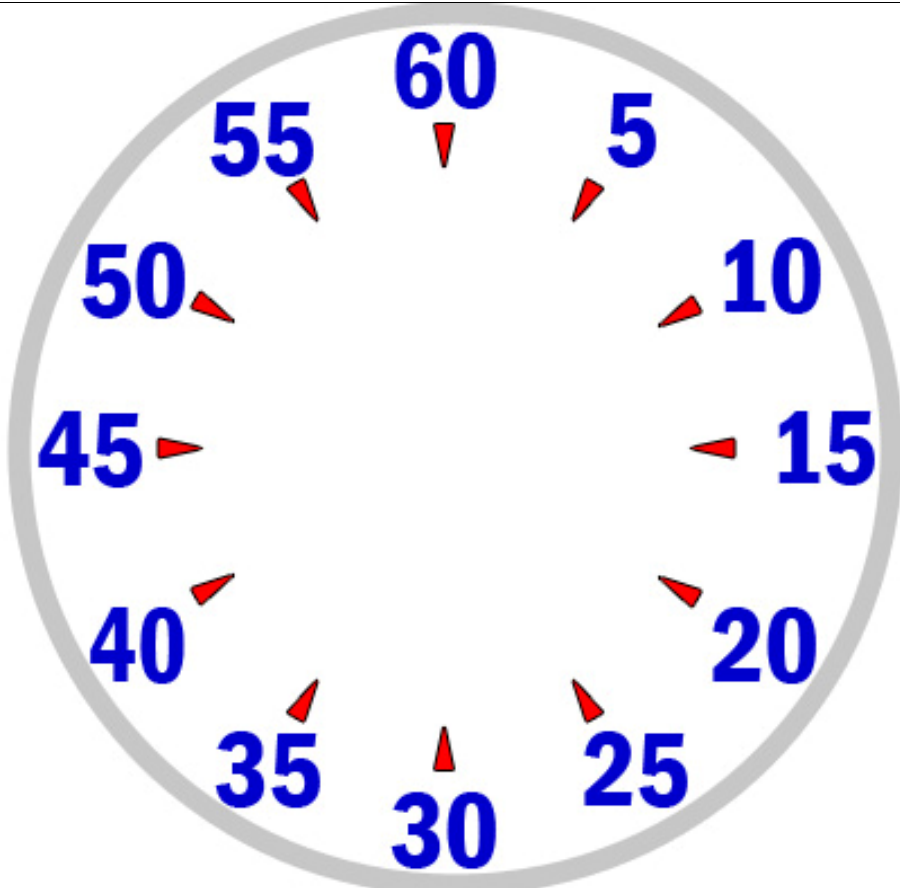
$38 + 1:10 = 39:10$

Leaving on the bottom means you
will be coming in on a :40
(remember the :10)

8 (current minute hand) + $39 = 47$.

ANSWER:

**You will start the third 1600 on
47:40**



SCENARIO #7:

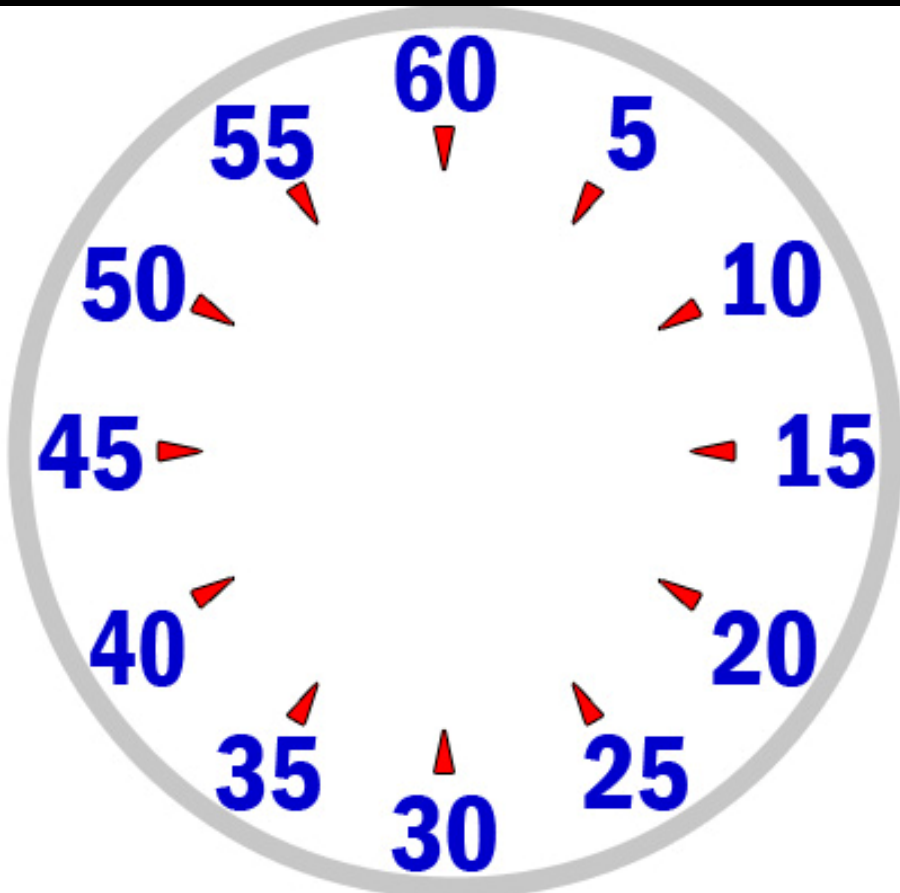
6 x 75 – odds on 1:10/evens on 1:05
4 x 25 - :25

Previous set has you starting on the :45

QUESTION:

Where will the second hand be when you start your 25's?

BEND HERE

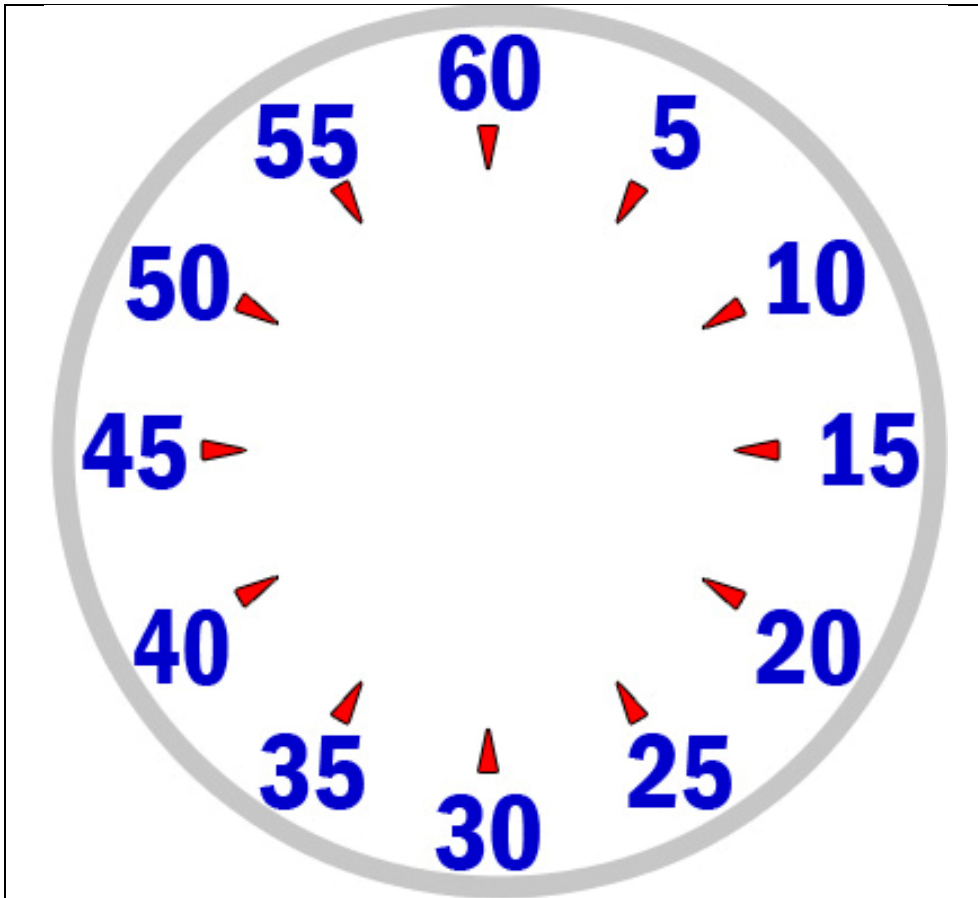


CLUE:

Add the odds together first 1:10 x 3 = 3:30
Then add the evens together 1:05 x 3 = 3:15

ANSWER:

You will start the 25's on the :30



SCENARIO #8:

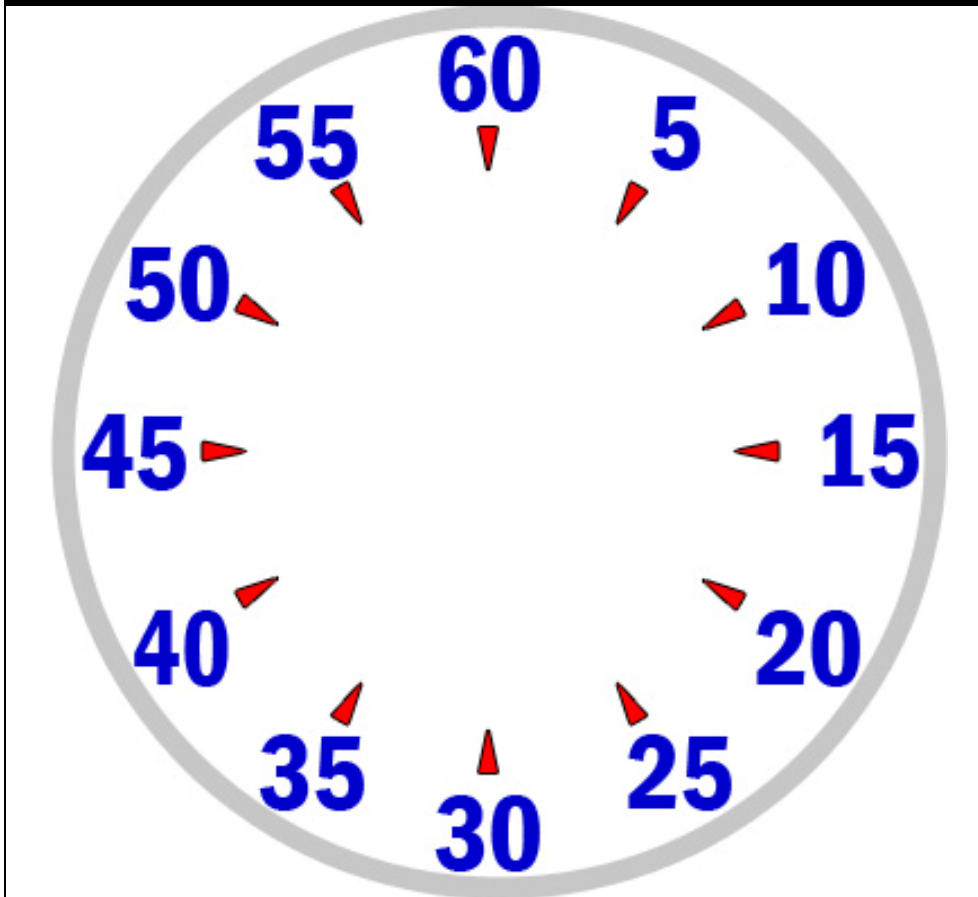
4 x 200 – 2:55
 2 x 500 – 6:35
 4 x 200 – 2:45

Coach starts you on the top (:60).

QUESTION:

Where will the second hand be when you start the 2nd group of 200's?

BEND HERE



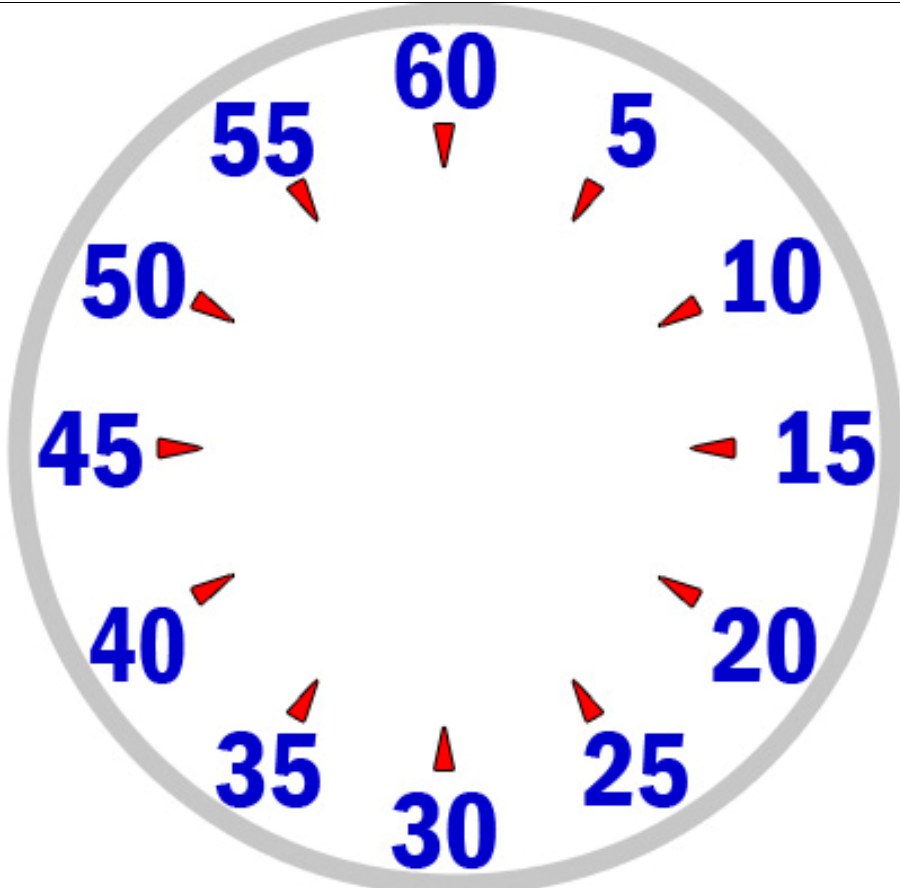
CLUE:

Instead of :55's, just deduct :05 from the prior interval. So in this case, you will be leaving on the 2:55 for #2. For #3, just deduct :05. Same with :04. (4 x -:05 = -:20)

For the 500's, :35 + :35 = 1:10. Ignore the minute and just add +:10 back. (-:20 + :10 = -:10).

ANSWER:

You would depart for the 4 x 200's on the :50.



SCENARIO #9:

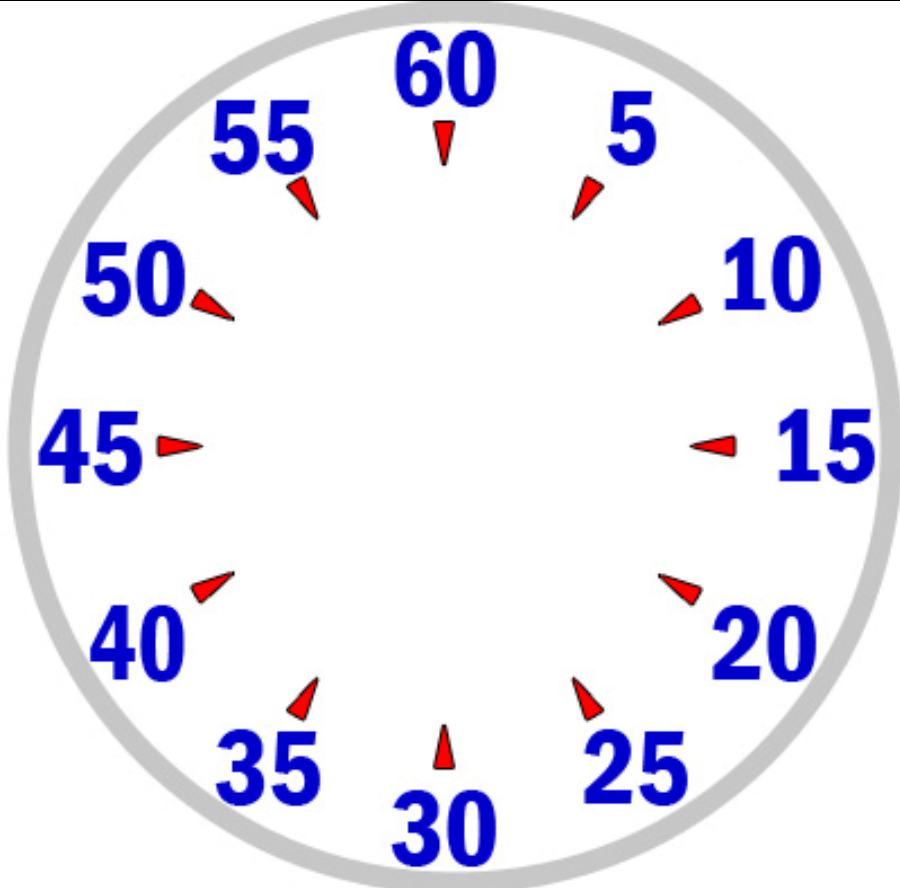
8 x 75 on :55

You leave on the bottom (:30).

QUESTION:

What are your interval leave times?

BEND HERE



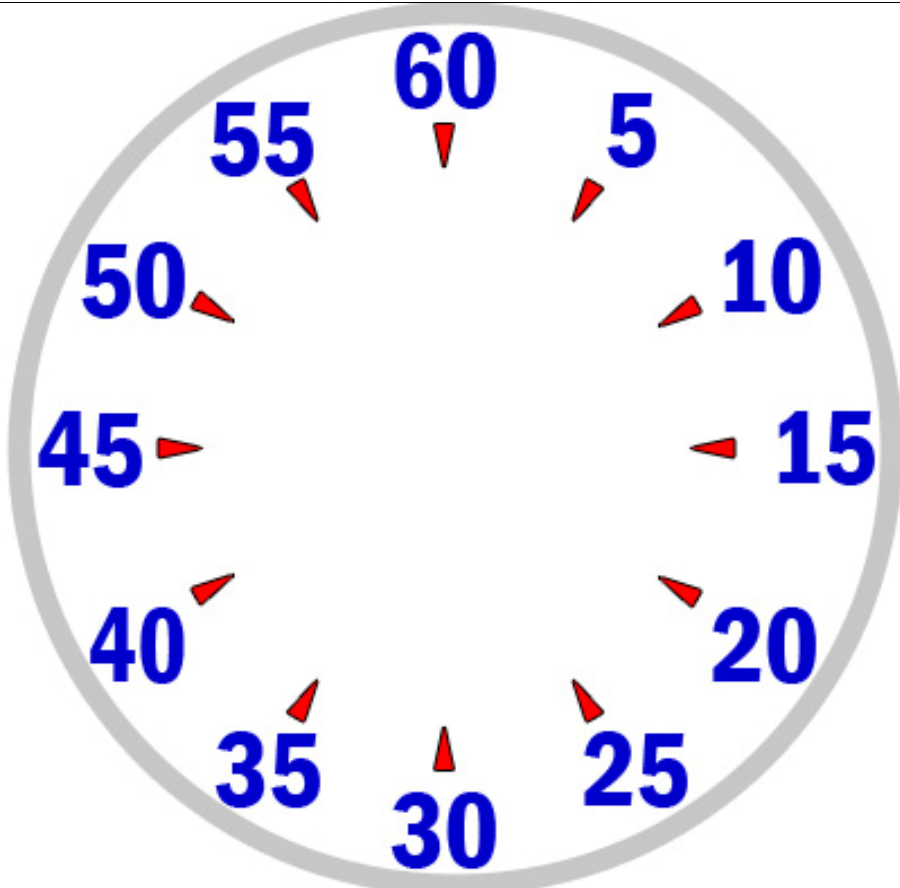
CLUE:

Ignore the :55. Just subtract :05 for each interval.

You leave on the bottom. For #2, you leave on :25. For #2 you leave on :20....

ANSWER:

:30/:25/:20/:15/:10/:05/:60/:55



SCENARIO #10:

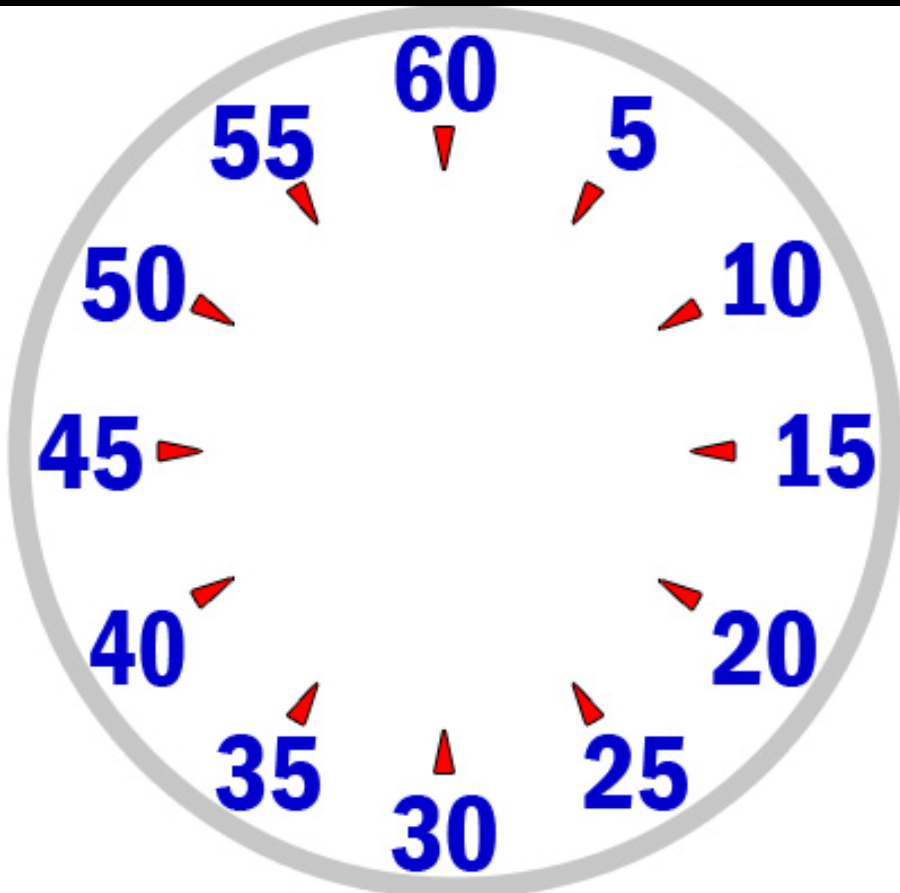
8 x 100 on 1:15
4 x 150 on 1:45

Coach sends the lane leader on the top (:60). You go :05 seconds later.

QUESTION:

Where will the second hand be when you start the 150's?

BEND HERE



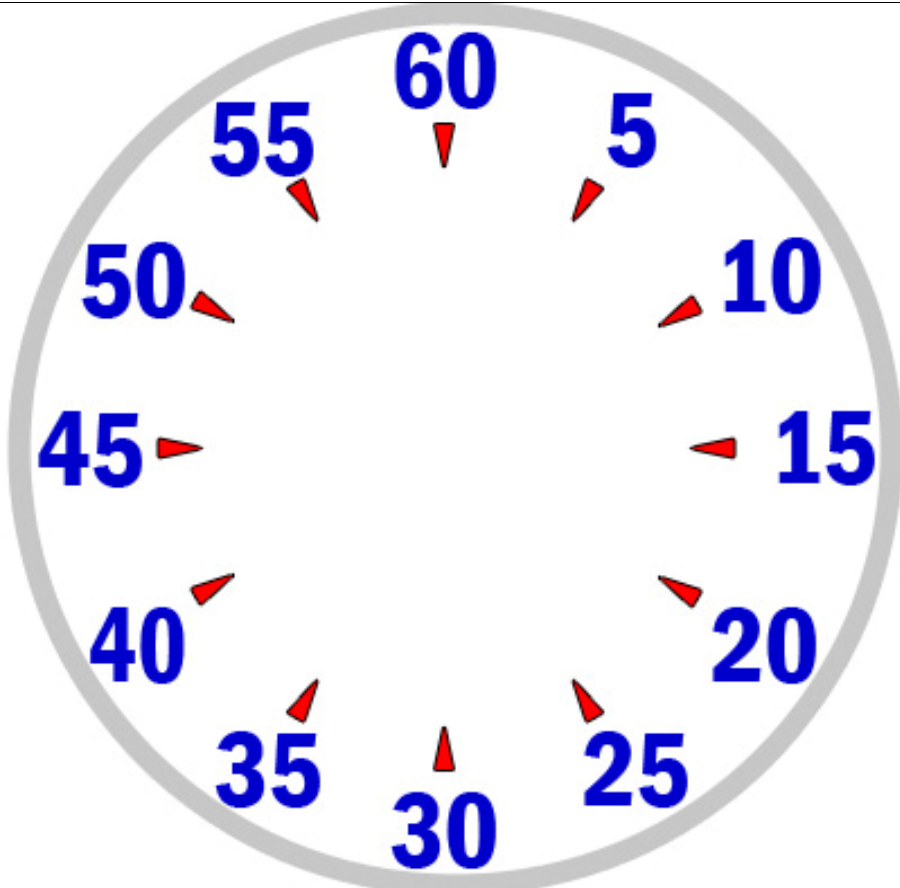
CLUE:

:15's are great. They are a quarter of the clock! Almost as good as :30's.

Any time you have a multiple of four :15's, you will end up back where you started.

ANSWER:

Who cares when your coach sent you? You know that you will end up back at the :05 for the 150's.



SCENARIO #11:

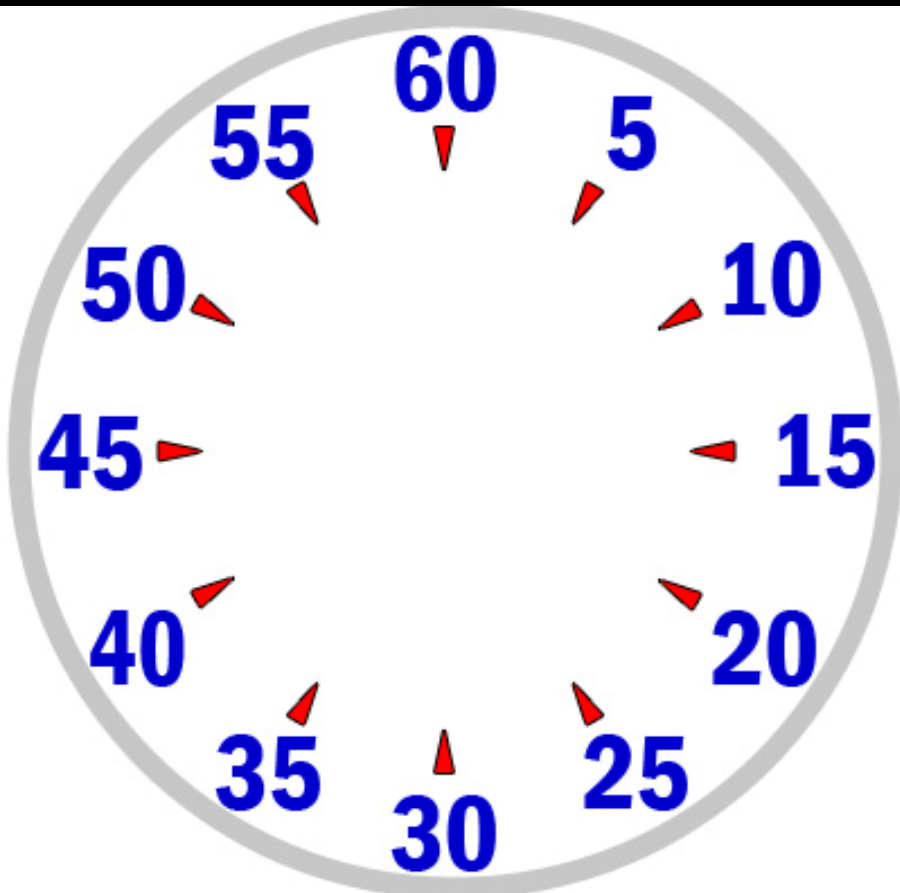
1 x 500 on 7:00 (5 x 100 descend on :05r)

Coach sends you on the top.

QUESTION:

How do you figure out your average pace per 100?

BEND HERE



CLUE:

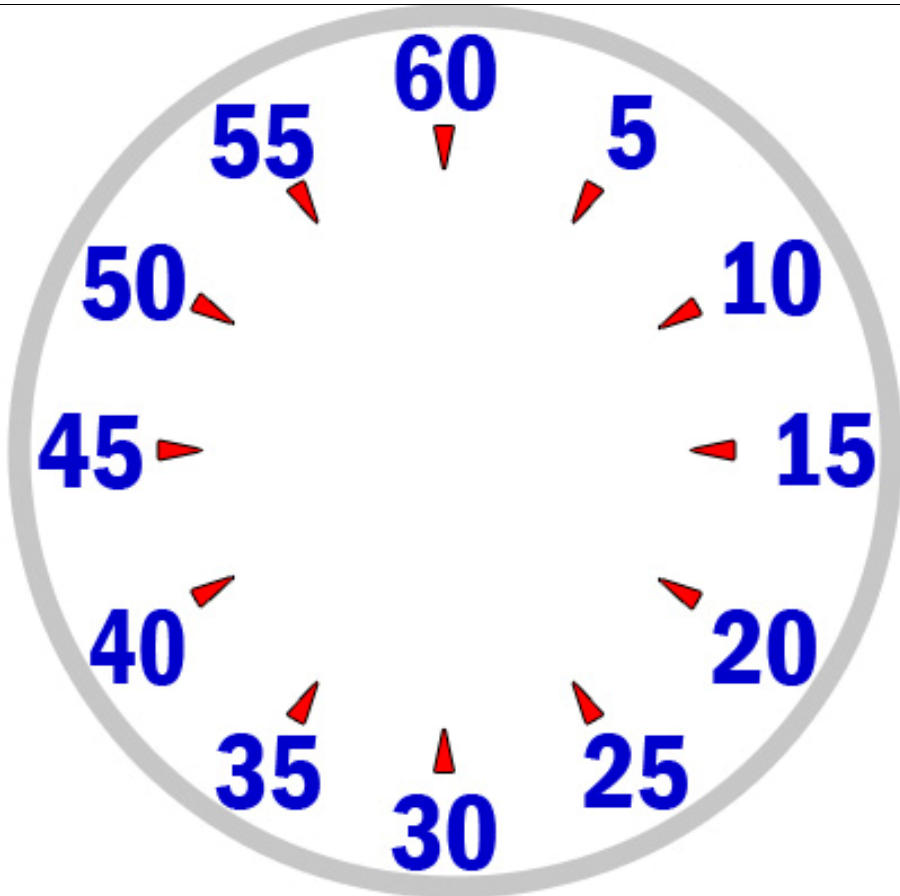
You received :05r between each 100. $4 \times :05r = :20r$.

You finish with a 6:35.

So subtract :20 from 6:35. That leaves you with 6:15.

ANSWER:

Your average pace per 100 is 1:15.



SCENARIO #12:

4 x 500 on 6:50

Your coach sends you on the top (:60).

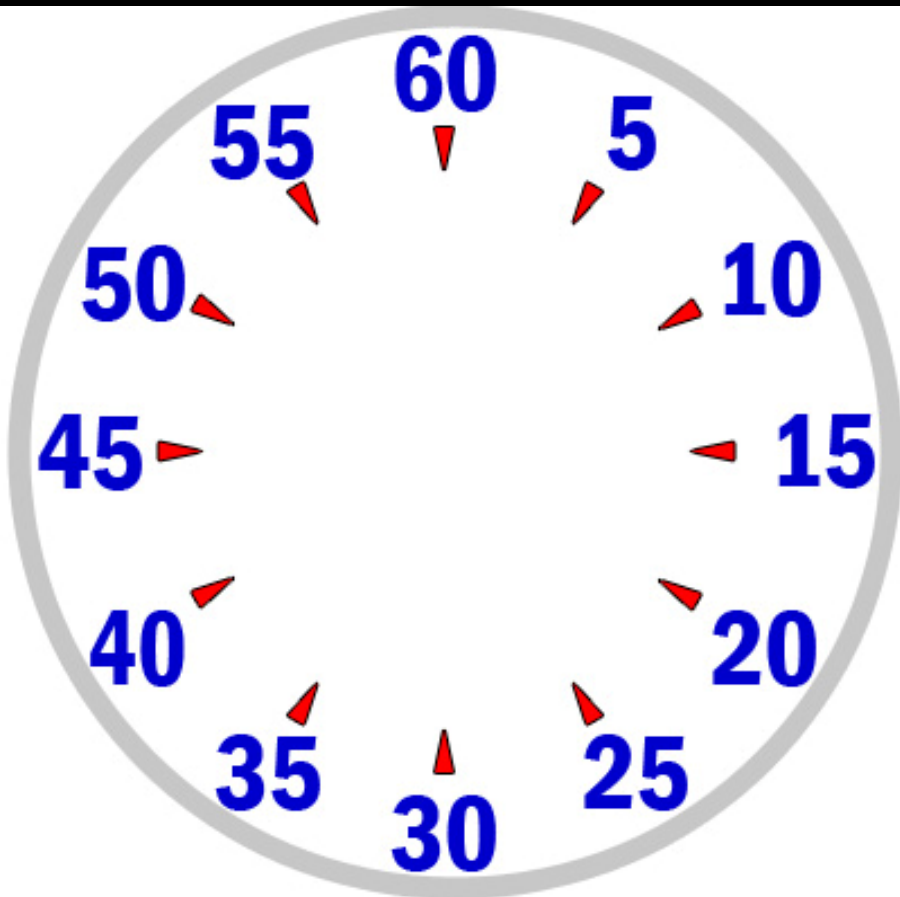
You are a solid 1:20 pace swimmer.

For #3 you finished on the top.

QUESTION:

Are you swimming the set correctly?

BEND HERE

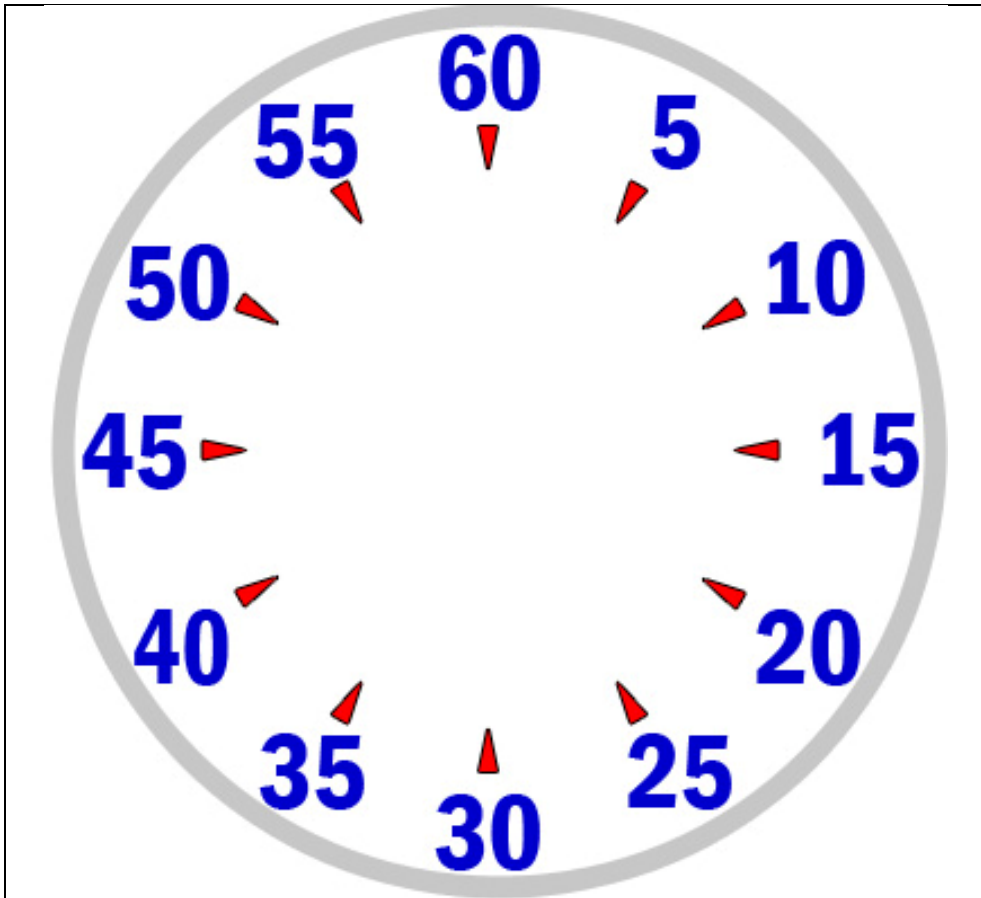


CLUE:

For #2 you started on the :50.

ANSWER:

No. You only swam a 450 for your 3rd 500.



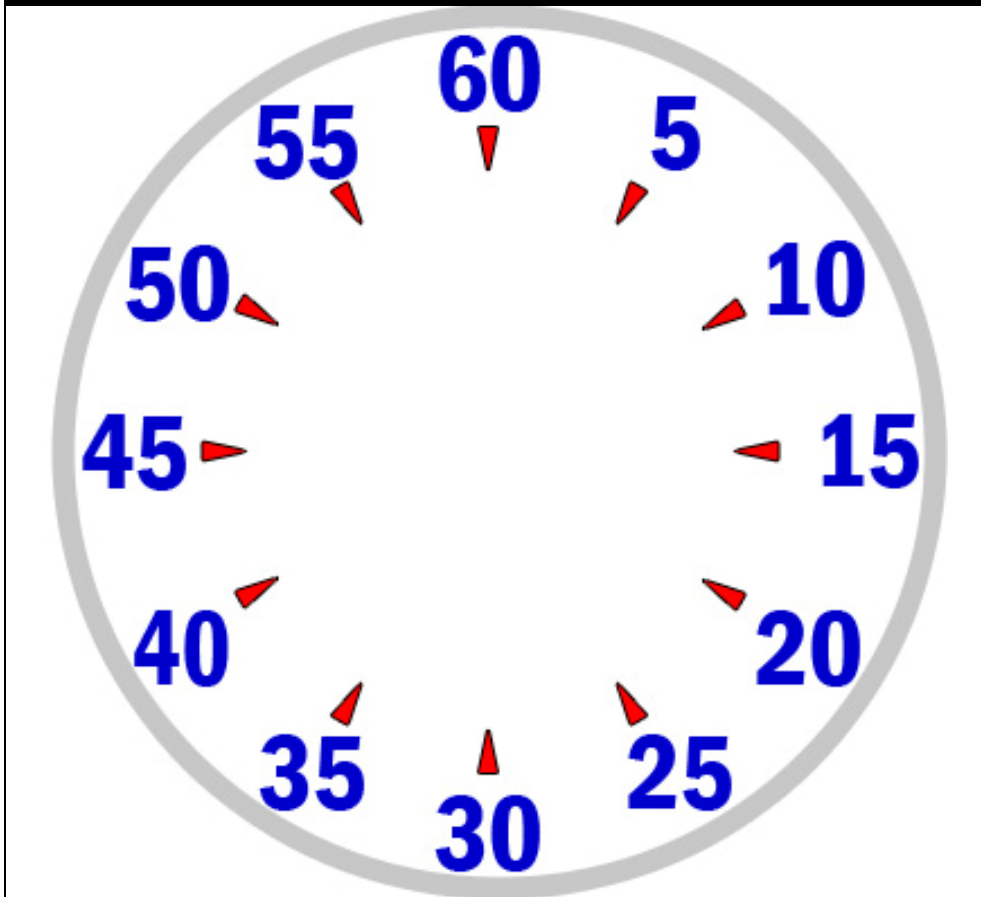
SCENARIO #13:

When swimming at 80% you consistently swim 1:23 for a 100 freestyle. Your coach gives you a set of 5 x 100 on 1:35. He sends you on the bottom.

QUESTION:

Where will the second hand be when you leave for #3?

BEND HERE



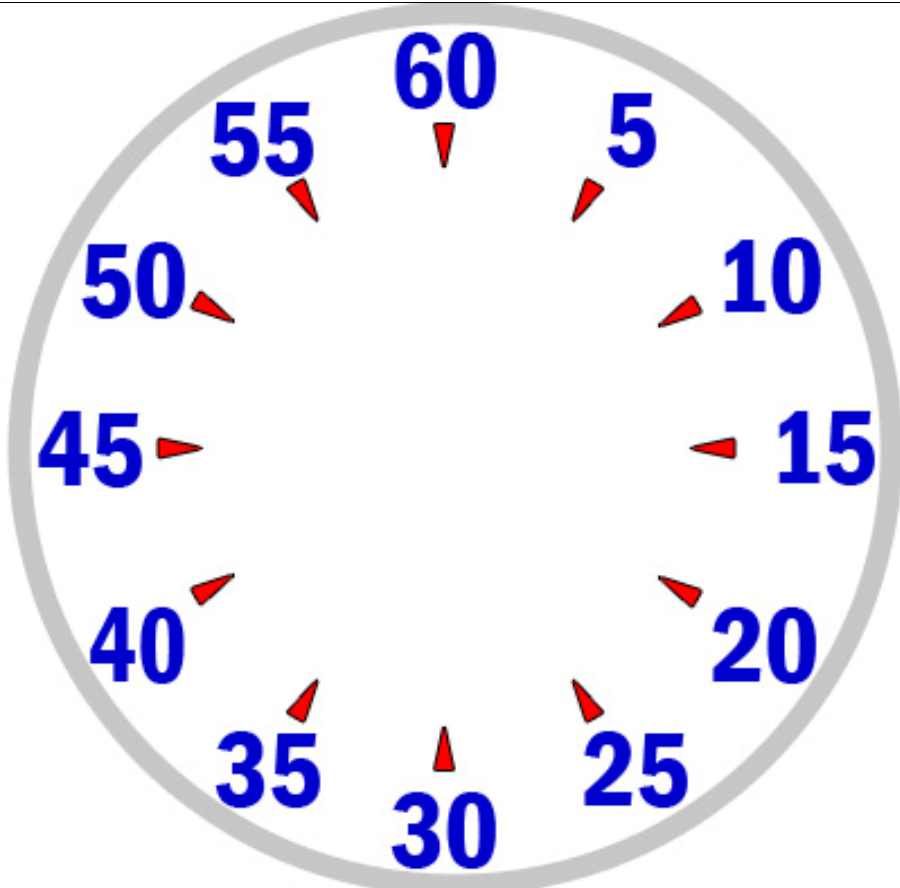
CLUE:

You have approximately :12 rest between each 100.

Your pace doesn't matter. Your interval hasn't changed.

ANSWER:

You would depart for #3 when the second hand is on the :40.



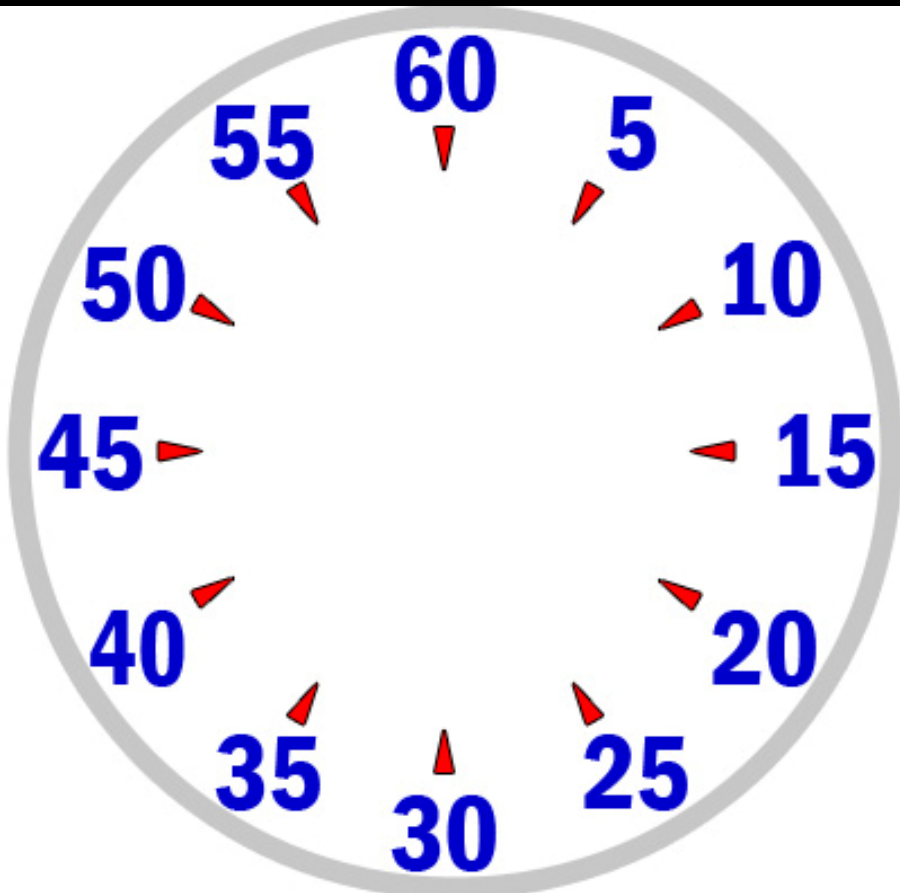
SCENARIO #14:

When swimming at 90% effort you consistently swim 1:21 for a 100 freestyle. Your coach gives you 2 x 500 on 7:00.

QUESTION:

Assuming you swim consistently at 90% pace for your first 500, how much rest should you have between 500's?

BEND HERE



CLUE:

$$2 \times 100 @ 1:21 = 2:42$$

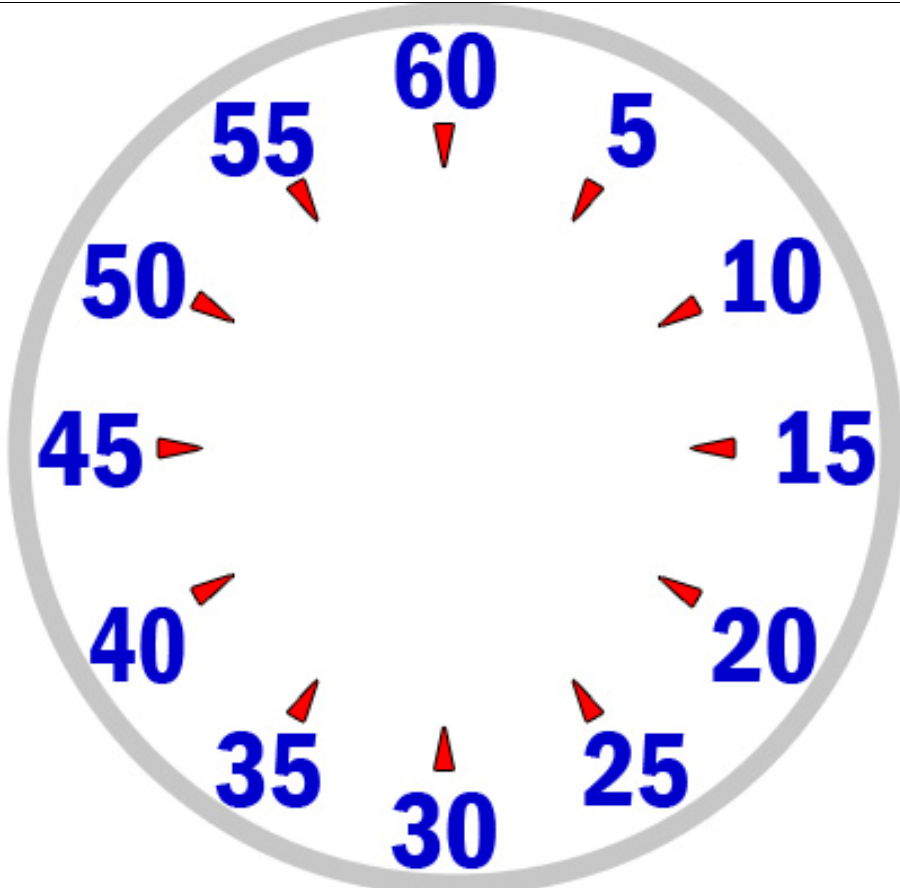
$$3 \times 100 @ 1:21 = 4:03$$

$$4 \times 100 @ 1:21 = 5:24$$

$$5 \times 100 @ 1:21 = 6:45$$

ANSWER:

You should have :15 rest between 500's. Better drink your water fast!



SCENARIO #15:

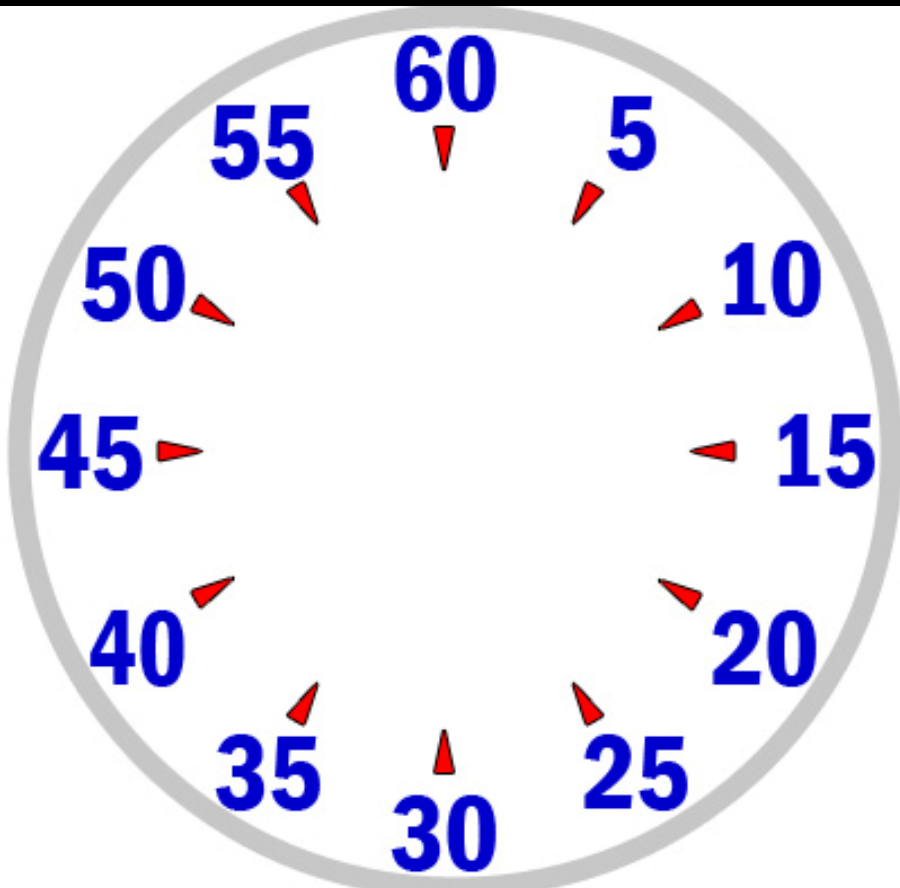
When swimming at 90% effort you consistently swim a 1:15 for your 100 pace.

Your set is 2 x 1600 at 90% on 21:30

QUESTION:

How much rest will you have between 1600's if you swim consistently?

BEND HERE



CLUE:

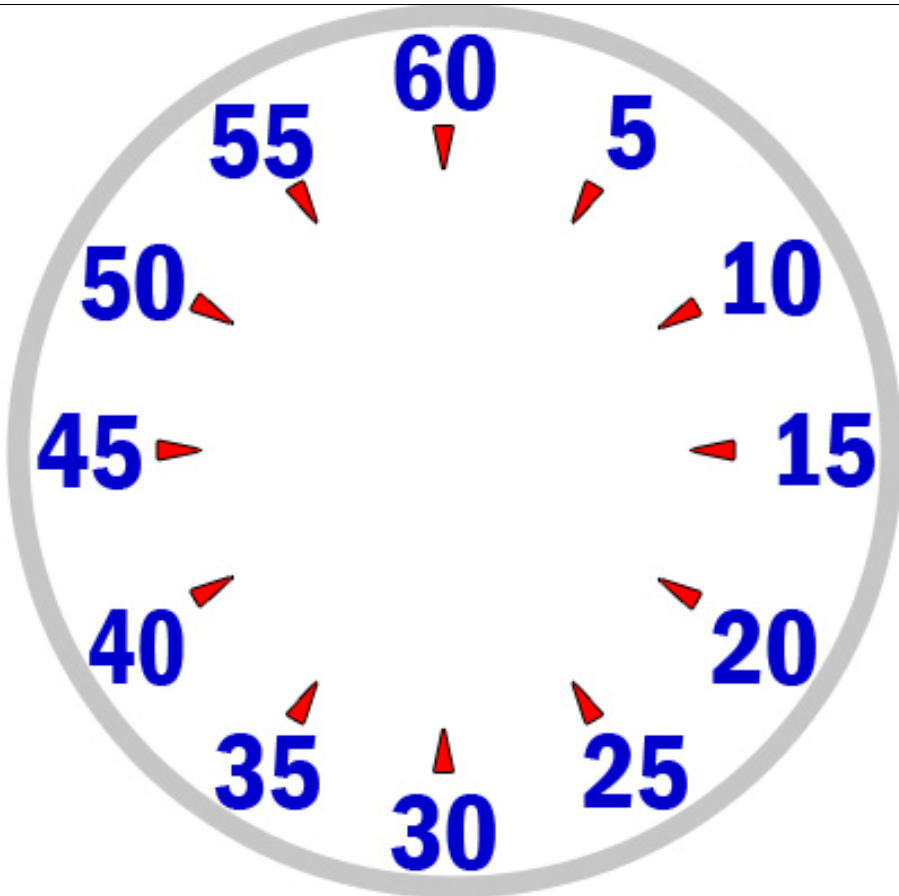
$$4 \times 1:15 = 5:00$$

$$8 \times 1:15 = 10:00$$

$$16 \times 1:15 = 20:00$$

ANSWER:

You would have approximately 1:30 rest. Plenty of time to run to the bathroom.



SCENARIO #16:

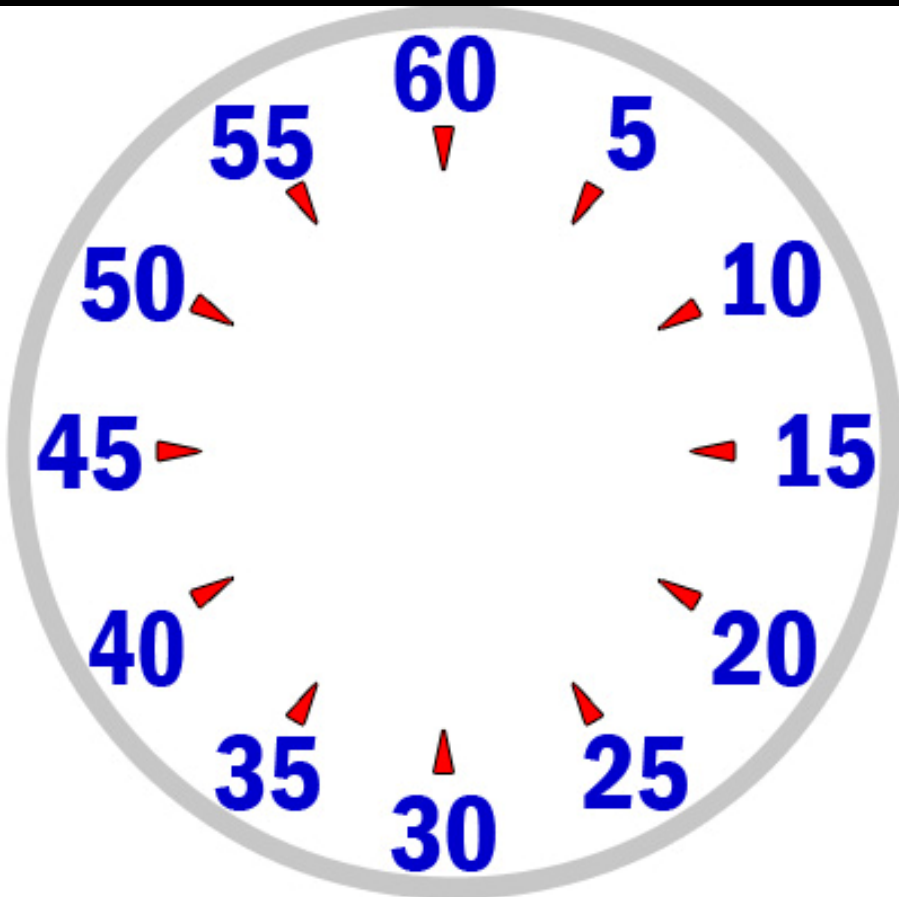
8 x 50 on :35

Your coach starts you on the top.

QUESTION:

List all of the clock departure times for each 50.

BEND HERE



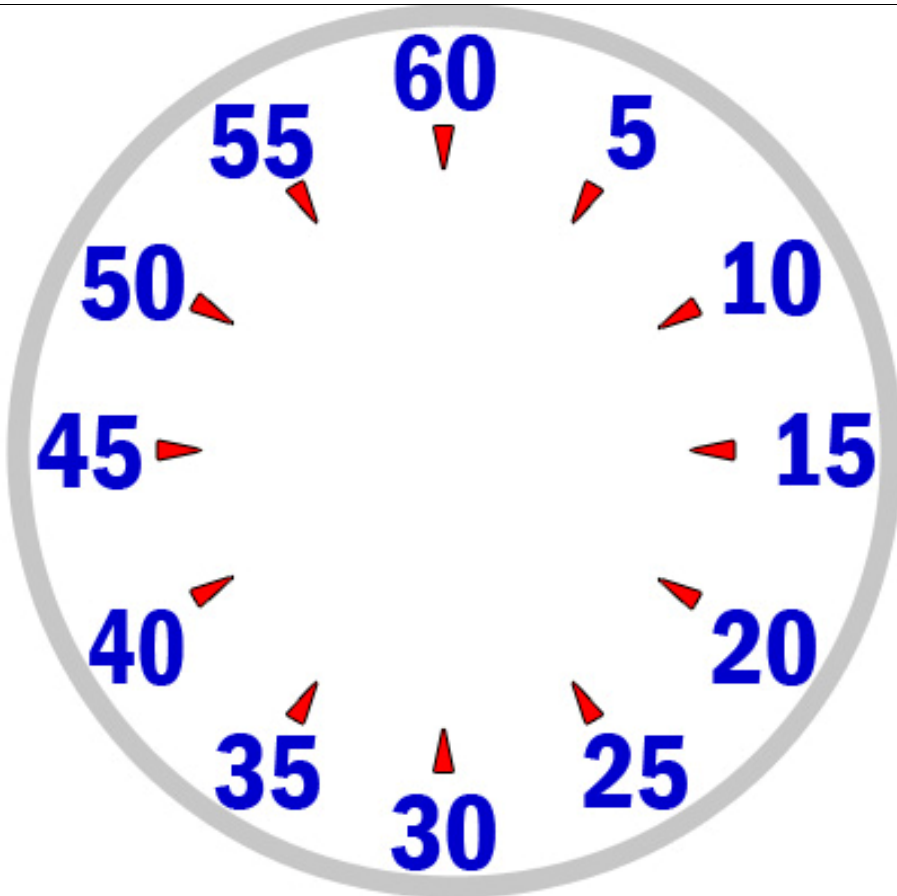
CLUE:

You would start the set on the :60

The departing interval will always be the opposite side of the last interval + :05

ANSWER:

:60/:35/:10/:45/:20/:55/:30/:5



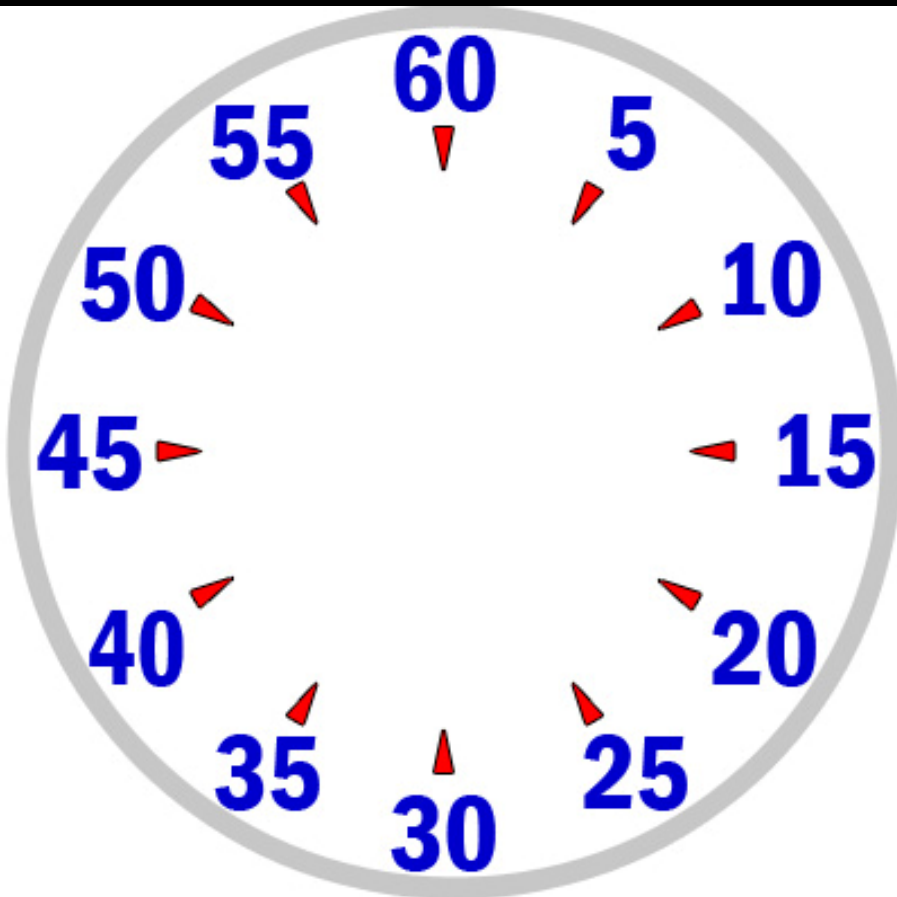
SCENARIO #17:

When swimming at 90% effort you consistently swim a 1:18 for your 100 pace. Your set is 3 x 350 on 4:30.

QUESTION:

How much rest will you have between 350's if you swim at 90% effort pace?

BEND HERE



CLUE:

Round up to 1:20 for your pace

$$3 \times 1:20 = 4:00$$

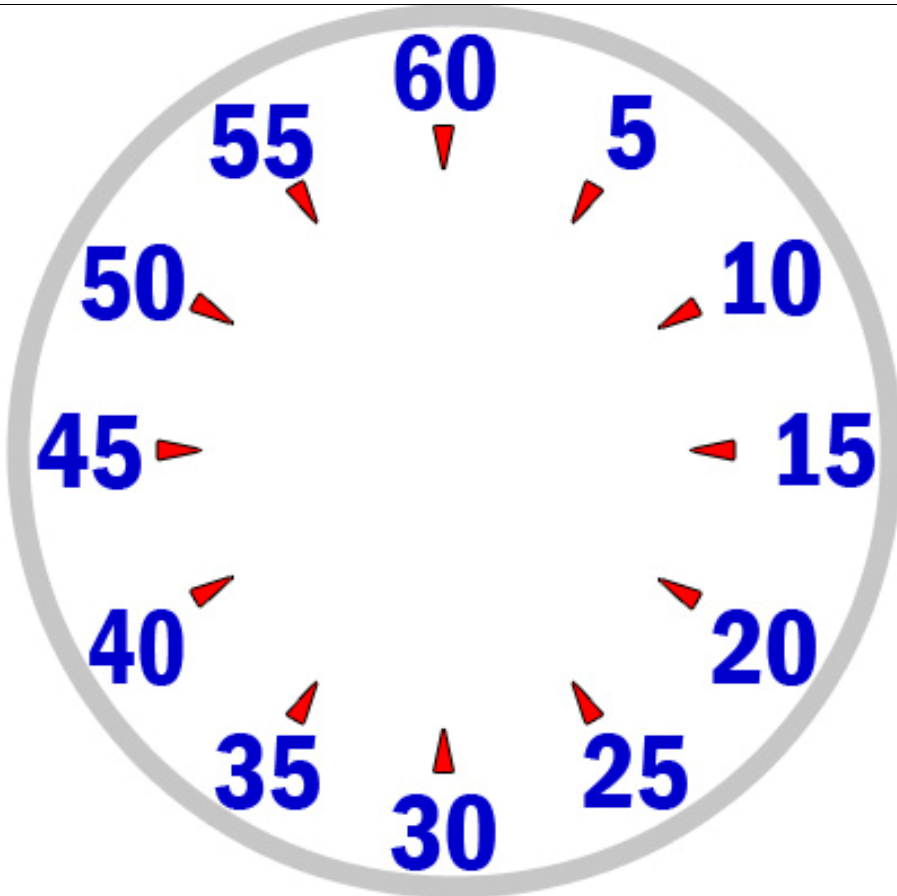
$$\frac{1}{2} \times 1:20 = :40$$

$$4:00 + :40 = 4:40$$

Now subtract the :06 for the 3 100's and :01 for the 50.

ANSWER:

No rest. You will be coming in on 4:33. What was your coach thinking?



SCENARIO #18:

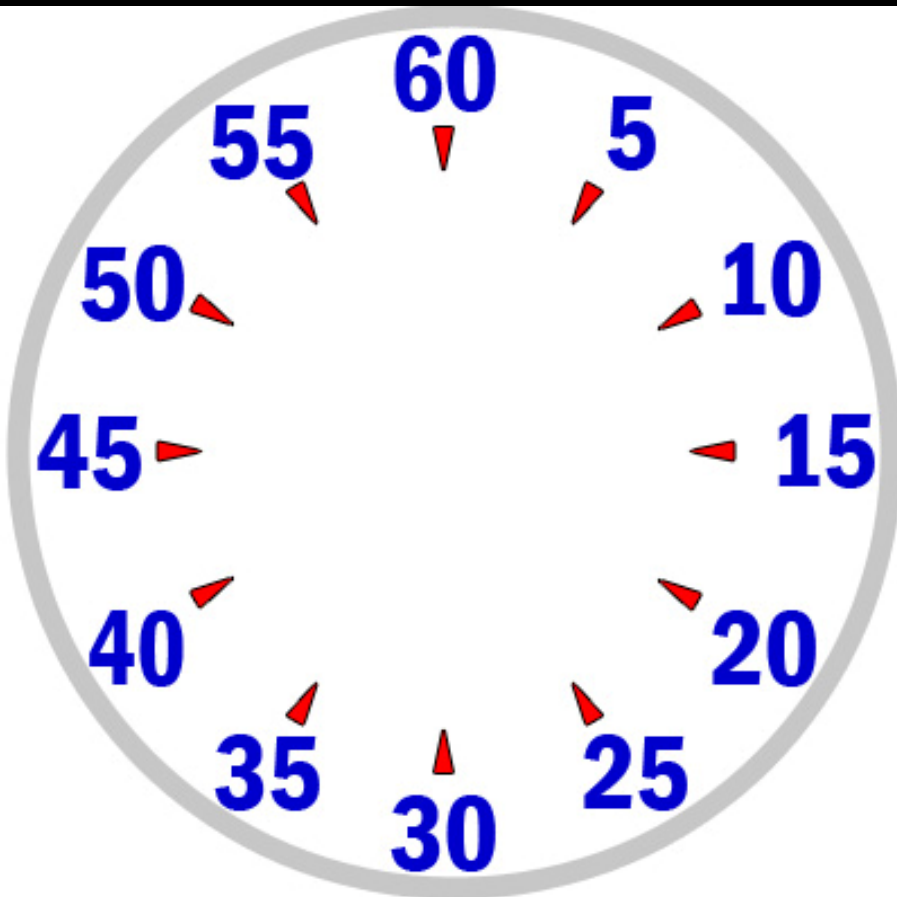
2x{
5 x 125 on 1:45
1 x 200 on 2:45

Your coach starts you on the top (:60).

QUESTION:

Where will the second hand be when you start round 2?

BEND HERE



CLUE:

Lots of 5's here

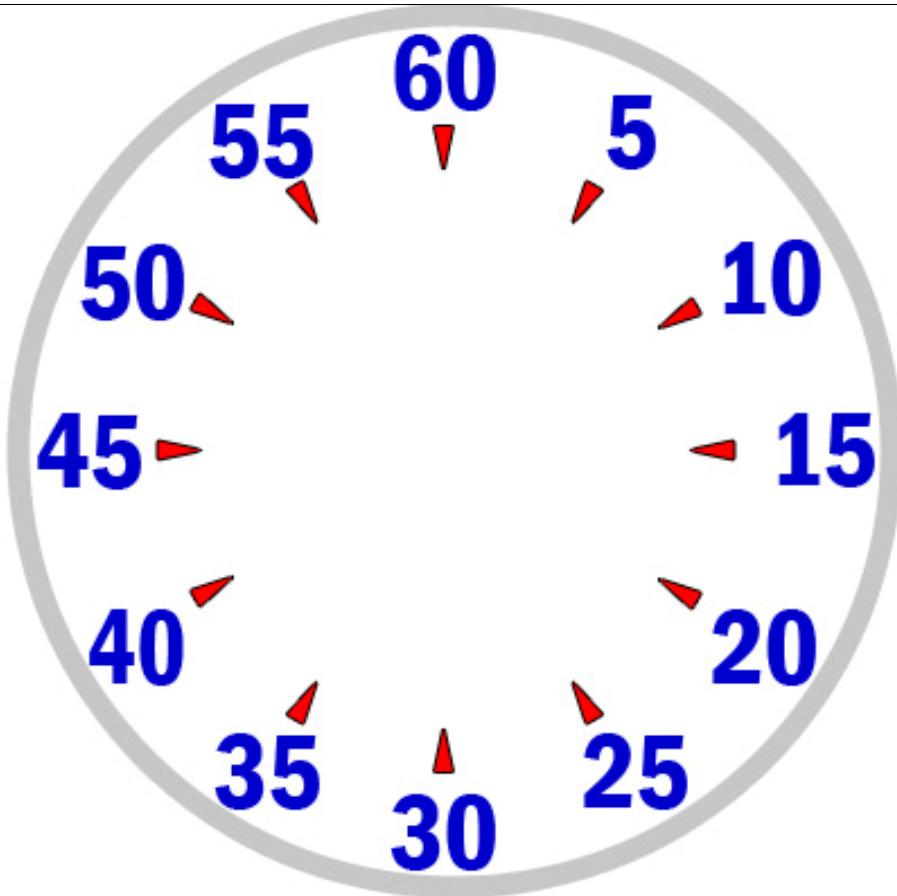
4 x :45 always brings you back to the start.

2 x :45 always brings you to the other side of the clock.

You have 6 :45's here.

ANSWER:

You would start the second round on the bottom (:30).



SCENARIO #19:

10 x 100 on :05r – max effort

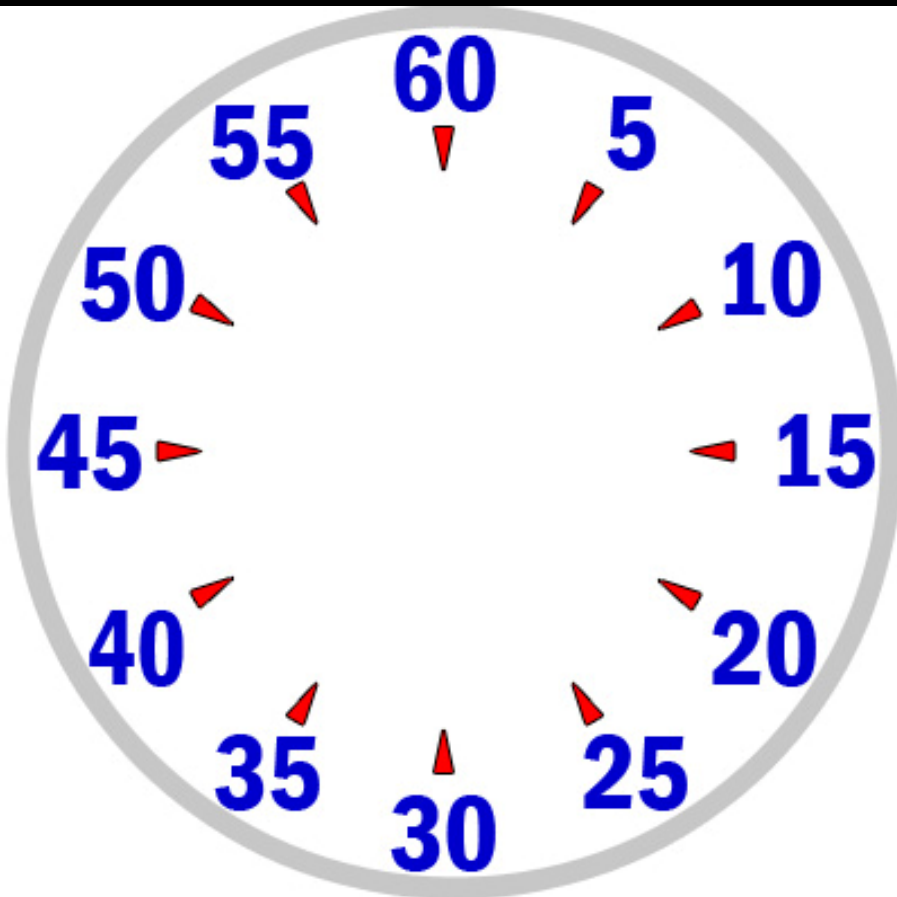
Your coach sends you on the top (:60) and the minute hand is on the 15.

You finish with the minute hand on the 28 and the second hand on the :15

QUESTION:

What was your average pace?

BEND HERE



CLUE:

Your total swim time was 13:15

You got :05 rest between each 100

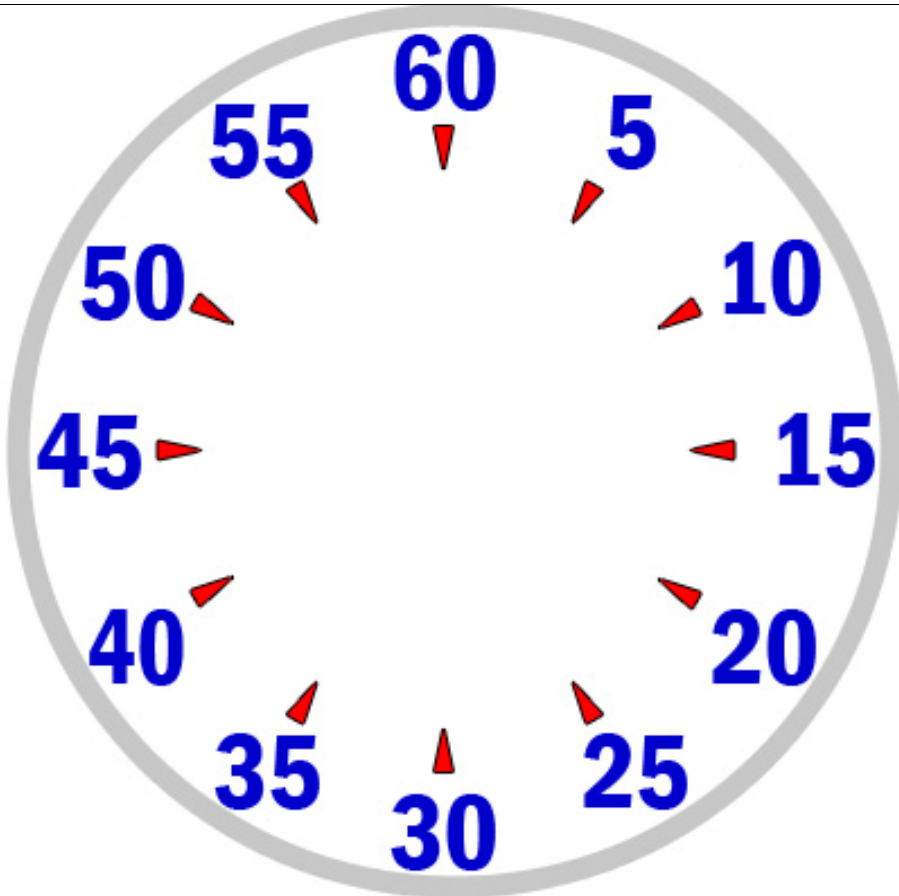
$$:05 \times 9 = :45$$

$$13:15 - :45 = 12:30$$

$$12:30 / 10 = 1:15 \text{ pace}$$

ANSWER:

Your average pace was 1:15



SCENARIO #20:

9 x 75 – 1:10

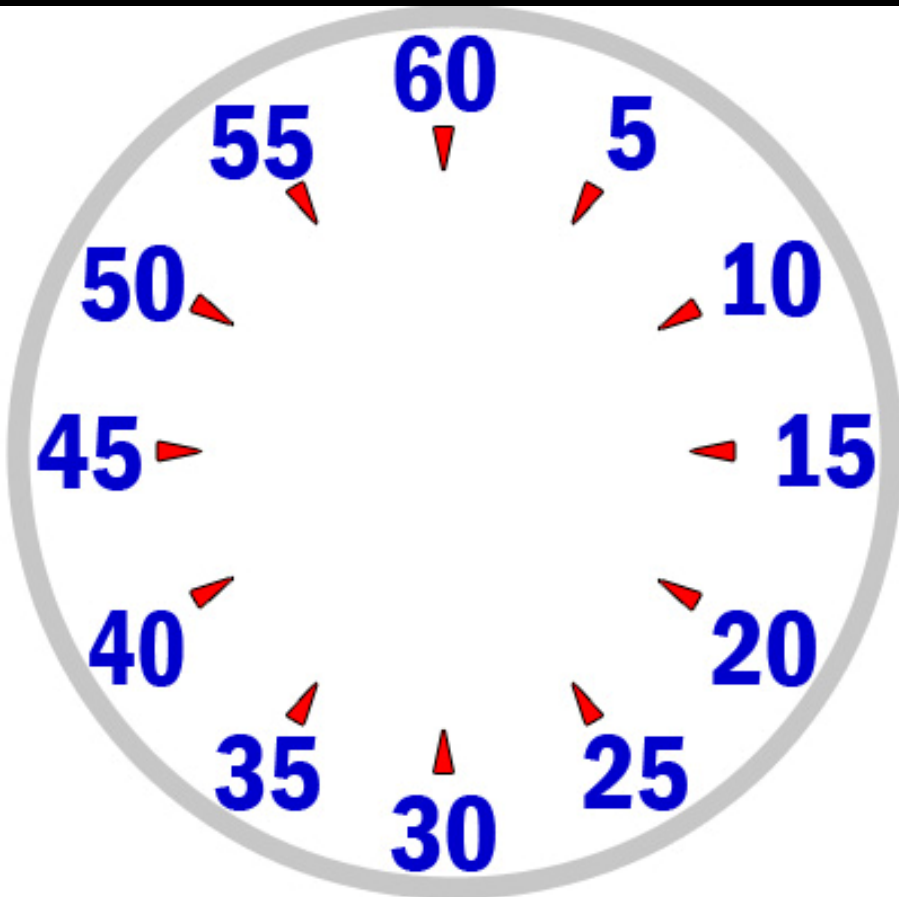
3 x 125 – 1:45

Your coach starts you on the :15

QUESTION:

When will you start the first 125?

BEND HERE



CLUE:

:10's are awesome.

3 x :10 = :30

3 x :30 = opposite side from where you started

ANSWER:

You will start the first 125 on the :45.