Clocks & Calendars Practice

20 Minutes – (Don't skip any questions)

1) What is the angle included between the hands at $2:19\ p.m.$?
   A. 39.5 B. 42 C. 54 D. 44.5 E. 43

2) The minute hand is half as long as the hour hand. What is the ratio of the distance travelled by the minute hand in 6 hours and the distance by the hour hand in 1 day?
   A. $3:4$ B. $6:24$ C. $3:1$ D. $6:1$ E. $1:6$

3) What is the angle between the hour and the minute hands 15 minutes after $10:31$?
   A. 110 B. 129.5 C. 130 D. 50 E. 47

4) What is the difference in the degree measures of the angles formed by the hour hand and the minute hand of a clock at $12:45$ and $5:45$?
   A. 17.5 B. 13.5 C. 11 D. 20.5 E. 15

5) If March 14, 2011 is a Monday, what day would it 16th October, 2012 be?
   A. $Sunday$ B. $Monday$ C. $Tuesday$ D. $Wednesday$ E. $Thursday$

6) What day was it on 5th January 2009? (Calculate using today's day and date)
   A. $Sunday$ B. $Monday$ C. $Tuesday$ D. $Wednesday$ E. $Thursday$

7) What day would it be on 1th January 2037? (Calculate using today's day and date)
   A. $Sunday$ B. $Monday$ C. $Tuesday$ D. $Wednesday$ E. $Thursday$

8) What is the difference in the degree measures of the angles formed by the hour hand and the minute hand of a clock at $1:50$?
   A. 90 B. 100 C. 105 D. 115 E. 120

9) If the clock gains 1 second per minute, and if the time is exactly $1:23$ now, what would be the time showed by the clock after 45 minutes?
   A. $2:07:45$ B. $2:08:45$ C. $2:09:50$ D. $2:10:45$ E. $2:11:45$

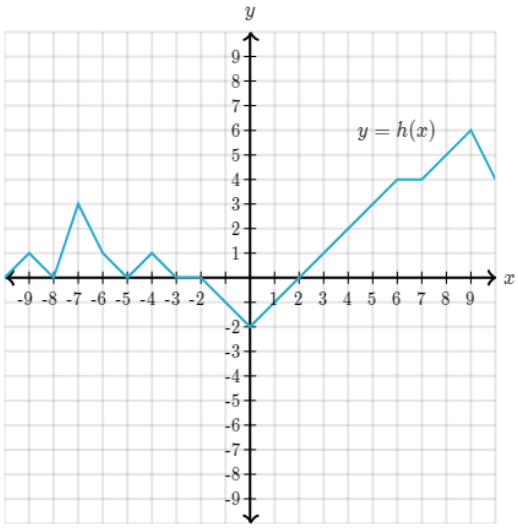
10) Quantitative Comparison:

Quantity A	Quantity B
The measure in degrees of the smaller angle formed by the hour hand and the minute hand of a clock at 7:37	The measure in degrees of the smaller angle formed by the hour hand and the minute hand of a clock at 4:23

A. A > B B. B > A C. A = B D. Can't be determined

11) Let $g(x) = 8x + 2$. If $g(y) = -62$. What is the value of y? (Numeric Entry)

12) What is the input value other than -7 for which $h(x) = 3$? (Numeric Entry)



$x =$

13) For a given input value x, the function f outputs a value y to satisfy the following equation.

$$y + 6 = 5(x - 4)$$

What is the formula for $f(z)$ in terms of z?

A. $z + 6$ B. $5z - 26$ C. $5(z - 4)$ D. $\frac{z+6}{5} + 4$ E. $\frac{z+10}{5}$

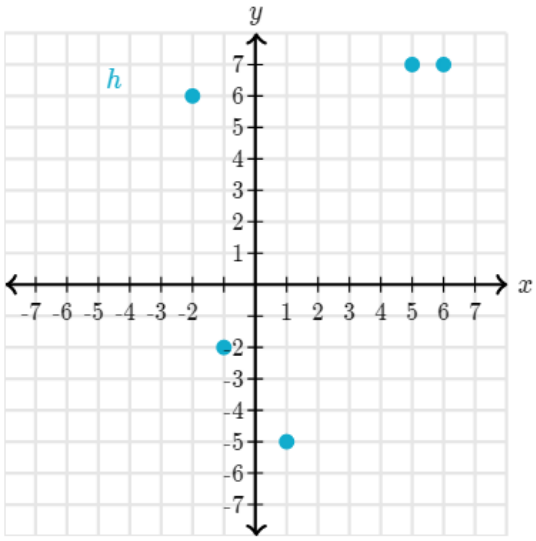
14) Valak is a taxi driver. $M(n)$ models Valak's fee (in dollors) for her n^{th} drive on a certain day. What does the statement $M(8) < M(4)$ mean? (Select all that apply)

A. Valak earned $\$8$ for a drive that was earlier than a drive for which he earned $\$4$.
B. Valak earned $\$8$ for fewer drives than the number of drives for which he earned $\$4$.
C. Valak earned less money for her 8^{th} than she earned for her 4^{th} drive.

15) Annabelle's class had a math exam where the grades were between 0 and 10. $N(g)$ models the number of students whose grade on the exam was g. What does the statement $N(8) > 2N(5)$ mean? (Select all that apply)

A. The number of students whose grade was higher than 5 is greater than the number of students whose grade was 5 or lower.
B. The number of students whose grade was 8 more than twice the number of students whose grade was 5.
C. There are 8 students whose grade was higher than twice the grade of another group of 5 students.

16) What is the domain of h?



A. $-5 \leq x \leq 7$ B. $\{-5, -2, 6, 7\}$ C. $-2 \leq x \leq 6$ D. $\{-2, -1, 1, 5, 6\}$ E. $None$