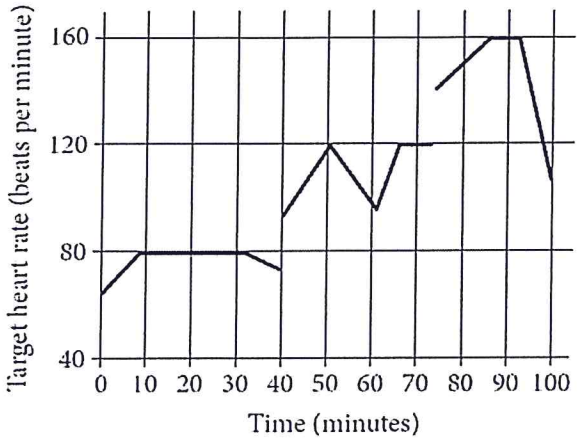
Bellwork Hon Alg 2 Wednesday, March 1, 2017

You CAN use a calculator on the first three questions.

1. John runs at different speeds as part of his training program. The graph shows his target heart rate at different times during his workout. On which interval is the target heart rate strictly increasing then strictly decreasing?



A) Between 0 and 30 minutes
B) Between 40 and 60 minutes
C) Between 50 and 65 minutes
D) Between 70 and 90 minutes

4. If $16 + 4x$ is 10 more than 14, what is the value of $8x$?

A) 2
B) 6
C) 16
D) 80

6.

1 decagram = 10 grams
1,000 milligrams = 1 gram

A hospital stores one type of medicine in 2-decagram containers. Based on the information given in the box above, how many 1-milligram doses are there in one 2-decagram container?

A) 0.002
B) 200
C) 2,000
D) 20,000

NO CALCULATOR on the last two questions.

14. If $3x - y = 12$, what is the value of $\frac{8^x}{2^y}$?

A) 2^{12}
B) 4^4
C) 8^2
D) The value cannot be determined from the information given.

20. If $a = 5\sqrt{2}$ and $2a = \sqrt{2x}$, what is the value of x ?

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(1) (B) 40-60 min. All other intervals increasing is followed by a period of constant heart rate.

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(4) $16+4x = 14+10$

$16+4x = 24$

$-16 \quad -16$

$2(4x) = (8)2$

$8x = 16$

(C)

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(6) $2\ \cancel{dg} \cdot \frac{10\ \cancel{g}}{1\ \cancel{dg}} \cdot \frac{1000\ mg}{1\ \cancel{g}} = 20000\ mg$

(D)

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(14) $3x - y = 12$

$y = 3x - 12$

(A)

$\frac{8^x}{2^y} = \frac{(2^3)^x}{2^y} = \frac{2^{3x}}{2^y}$

$= \frac{2^{3x}}{2^{3x-12}} = 2^{3x-(3x-12)}$

$= 2^{12}$

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(20) $a = 5\sqrt{2}$

$2a = \sqrt{2x}$ $\Rightarrow$ $2(5\sqrt{2}) = \sqrt{2x}$

$(10\sqrt{2})^2 = (\sqrt{2x})^2$

$\frac{100 \cdot 2}{2} = \frac{2x}{2}$

$x = 100$