

7 The acidity in a swimming pool is considered normal if the average of three pH readings, p , is defined such that $7.0 < p < 7.8$. If the first two readings are 7.2 and 7.6, which value for the third reading will result in an overall rating of normal?

→ add values then divide by # of values.

- (1) 6.2
- (2) 7.3
- (3) 8.6
- (4) 8.8

$$\frac{7.2 + 7.6 + 7.3}{3} = 7.366\dots$$

needs to be between 7.0 and 7.8

$$= \frac{7.2 + 7.6 + x}{3}$$

← plug in answer choices and check

8 Dan took 12.5 seconds to run the 100-meter dash. He calculated the time to be approximately

- (1) 0.2083 minute
- (2) 750 minutes
- (3) 0.2083 hour
- (4) 0.52083 hour

time: 12.5 seconds
 $\div 60$ seconds
 0.2083... minutes

9 When $3x + 2 \leq 5(x - 4)$ is solved for x , the solution is

- (1) $x \leq 3$
- (2) $x \geq 3$
- (3) $x \leq -11$
- (4) $x \geq 11$

$$\begin{array}{r}
 3x + 2 \leq 5(x - 4) \\
 3x + 2 \leq 5x - 20 \\
 -5x \quad | \quad -5x \\
 \hline
 -2x + 2 \leq -20 \\
 -2x + 2 \leq -20 \\
 -2x \quad | \quad -2x \\
 \hline
 -2 \leq -22 \\
 \boxed{x \geq 11}
 \end{array}$$

10 The expression $3(x^2 - 1) - 1(x^2 - 7x + 10)$ is equivalent to

(1) $2x^2 - 7x + 7$

(3) $2x^2 - 7x + 9$

(2) $2x^2 + 7x - 13$

(4) $2x^2 + 7x - 11$

Use this space for computations.

$$\begin{aligned} & \textcircled{3x^2} - \textcircled{3} - \textcircled{1x^2} + \textcircled{7x} - \textcircled{10} \\ & \textcircled{2x^2} + \textcircled{7x} - \textcircled{13} \end{aligned}$$

→ y values

11 The range of the function $f(x) = x^2 + 2x - 8$ is all real numbers

(1) less than or equal to -9

(2) greater than or equal to -9

(3) less than or equal to -1

(4) greater than or equal to -1

→ type into $y =$ in calc

~~graph~~ • look at graph!

→ x-intercepts

12 The zeros of the function $f(x) = x^2 - 5x - 6$ are

(1) -1 and 6

(3) 2 and -3

(2) 1 and -6

(4) -2 and 3

→ type into $y =$ in calc

• look at graph!