1) $f(x) = 2x + 9$

$f(7) - f(4) =$

Jul 12-1:56 PM

1) $f(x) = 2x + 9$

$f(7) - f(4) =$

$f(x) = 2x + 9$

$f(7) = 2(7) + 9 = 23$

$f(4) = 2(4) + 9 = 17$

$f(7) - f(4)$

$= 23 - 17$

$= 6$

2) $f(x)=4x^2-2$

$f(3)=$

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2) $f(x)=4x^2-2$

$f(3)=$

$f(x)=4x^2-2$

$f(3)=4(3^2)-2=4(9)-2=34$

3)

f(x)	x
7	3
12	m
m+12	n

$f(x) = \frac{5x-1}{2}$

$n = ?$

3)

f(x)	x
7	3
12	m
m+12	n

$f(x) = \frac{5x-1}{2}$

$n = ?$

$f(m) = \frac{5m-1}{2} = 12$

$f(n) = \frac{5n-1}{2} = m+12$

$5m-1 = 24$

$5m = 25$

$m = 5$

$\frac{5n-1}{2} = 5+12$

$5n-1 = 34$

$5n = 35$

$n = 7$

4) $f(x)=-2x^2+11$ if $f(x)=3$ $x=?$

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4) $f(x)=-2x^2+11$ if $f(x)=3$ $x=?$

$-2x^2+11=3$

$-2x^2=-8$

$x^2=4$

$x=\pm 2$

4) $f(x)=-2x^2+11$

A) $f(-4)=-2(16)+11=-32+11$ ✗

(B) $f(-2)=-2(4)+11=-8+11$ ✓

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5) $f(x) = \frac{(x+1)^2}{2}$ $f(a)=18$ $f(9)=b$

$b+a=?$

5) $f(x)=\frac{(x+1)^2}{2}$ $f(a)=18$ $f(9)=b$

$b+a=?$

$f(a)=18$ $f(9)=b$

$\frac{(a+1)^2}{2}=18$ $\frac{(9+1)^2}{2}=b$

$36=(a+1)^2$ $\frac{100}{2}=b$

* $-6=a+1$ $50=b$

$-7=a$

$a+b=43$

B

* I tried 6 and that wasn't one of the answ. (55)

6) $f(x-3)=x^2-6x+9$ $f(x)=?$

A) x
B) $x-3$
C) x^2
D) x^2-6x+6
E) $x^2-6x+12$

6) $f(x-3)=x^2-6x+9$ $f(x)=?$

A) x

B) $x-3$

C) x^2

D) x^2-6x+6

E) $x^2-6x+12$

$f(x-3)=x^2-6x+9$

$=(x-3)(x-3)$

$f(x-3)=(x-3)^2$

$f(x)=x^2$

C

$f(\ )=(\ )^2$ $f(p-q)=(p-q)^2$

7) f(x)=5x-1 f(4)+f(2)+1 = ?

A) f(2)
B) f(4)
C) f(5)
D) f(6)
E) f(8)

7) $f(x)=5x-1$ $f(4)+f(2)+1 = ?$

A) f(2)
B) f(4)
C) f(5)
D) f(6)
E) f(8)

$f(4)=20-1$ $f(2)=10-1$

$20-1+10-1+1=29$

$29=5x-1$
$30=5x$
$x=6$

D

8) $f(x) = \frac{9x+1}{4} + \frac{-5x-7}{4}$

$x - f(x) =$

8) $f(x) = \frac{9x+1}{4} + \frac{-5x-7}{4}$

$x - f(x) = x - \left(\frac{9x+1}{4} + \frac{-5x-7}{4}\right)$

$= x - \left(\frac{9x+1-5x-7}{4}\right)$

$= x - \left(\frac{4x-6}{4}\right)$

$= x - \left(x - \frac{6}{4}\right)$

$= \frac{6}{4} = \frac{3}{2}$

OR $\frac{4x}{4} - \left(\frac{4x-6}{4}\right)$

$\frac{4x-4x+6}{4}$

$\frac{6}{4}$

9) r is a positive integer

$$f(r)=\begin{cases} r^2 \text{ when r is prime} \\ r-1 \text{ when r is not prime} \end{cases}$$

if $f(3)-f(4)=y$, what is $2y^{-1}$

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9) r is a positive integer

$$f(r)=\begin{cases} r^2 \text{ when r is prime} \\ r-1 \text{ when r is not prime} \end{cases}$$

if $f(3)-f(4)=y$, what is $2y^{-1}$

$f(3)-f(4)=y$

$3^2-(4-1)=y$

$9-3=y$ $\quad y=6$

$2y^{-1}=\frac{2}{y}=\frac{2}{6}=\frac{1}{3}$

10) Each of the following is within both the domain and range of $f(x) = \frac{1}{x^2-4}$ EXCEPT:

A) 1
B) 2
C) 3
D) 4
E) 5

10) Each of the following is within both the domain and range of $f(x) = \frac{1}{x^2-4}$ EXCEPT:

A) 1 $\frac{1}{x^2-4} = \frac{1}{1^2-4}$ ✓

B) 2 X

C) 3

D) 4

E) 5

$x^2-4 \neq 0$

$x^2 \neq 4$

$x \neq \pm 2$ Domain

$f(x) \neq 0$

$x^2 \geq 0$ so $x^2-4 \geq -4$

so all answers are in Range (+)

11)

x	-1	0	1	2	3
f(x)	2	5	8	11	14

if f(x)=ax+b and satisfies the above table for the values of x shown, what is b-a?

$f(x) = ax + b$

$f(1) = a + b = 8$
$f(0) = b = 5$
$\Rightarrow a + 5 = 8$, $a = 3$

if f(x)=ax+b and satisfies the above table for the values of x shown, what is b-a?

x	-1	0	1	2	3
f(x)	2	5	8	11	14