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MAC 1105.1A26
Cyr

Quiz 1
You must show all work to receive full credit!!

Problem 1. (2 pts) Simplify the following expression as much as possible: $\dfrac{6 \cdot -4 + (2^3)^2}{-5 + [(-6)^2 - 42 \div 2]}$.

$$\frac{6\cdot -4 + (2^3)^2}{-5+[(-6)^2-42\div 2]} = \frac{-24+8^2}{-5+[36-21]} = \frac{64-24}{-5+15} = \frac{40}{10} = \boxed{4}$$

Problem 2. (1 pt) Circle the correct choice: if $x < 2$, then $|8 - 4x|$ equals:

$8-4x > 0$ if $8 > 4x \Rightarrow 4x < 8$

$\Rightarrow x < 2$

So $|8-4x| = 8-4x$.

[a.] $8 - 4x$ b. $8 + 4x$ c. $-8 + 4x$

Problem 3. (2 pts) Find the difference: $3(8x^2 - 5x) - 5(3x^2 - 2x + 4)$.

$$3(8x^2-5x) - 5(3x^2-2x+4) = 24x^2 - 15x - 15x^2 + 10x - 20$$
$$= (24x^2 - 15x^2) + (10x - 15x) - 20$$
$$= \boxed{9x^2 - 5x - 20}$$