8.14a

1. What is the value of $\frac{1}{2}(x+8) - xy + z$ when $x = 4$, $y = -12$, and $z = -20$?

2. James evaluated the following algebraic expression.
$$\frac{|2x - y|}{\sqrt{5x + 2y}} \text{ when } x = 5 \text{ and } y = -2$$

His work is shown here.

$$\frac{|2x - y|}{\sqrt{5x} + 2y}$$

$$\frac{|2(5) - (-2)|}{\sqrt{5(5)} + 2(-2)}$$

$$\frac{|2(5) - 2|}{\sqrt{5(5)} + 2(-2)}$$

$$\frac{|10 - 2|}{\sqrt{5(5)} + 2(-2)}$$

$$\frac{|8|}{\sqrt{5(5)} + 2(-2)}$$

$$\frac{8}{\sqrt{5(5)} + 2(-2)}$$

$$\frac{8}{\sqrt{25} + 2(-2)}$$

$$\frac{8}{5 + 2(-2)}$$

$$\frac{8}{5 + (-4)}$$

$$\frac{8}{1} = 8$$

James made a mistake while evaluating this expression. Identify his mistake and rework the problem to obtain the correct answer.

3. What is the value of $4n(n \div 2)^3$ when $n = $ -8?

    A. -2048

    B. -384

    C. 384

    D. 2048

4. What is the value of $p\sqrt{q-r}$ when $p = 3$, $q = 17$, and $r = 8$?

    A. 3

    B. 9

    C. 15

    D. 27

5. What is the value of $\dfrac{(k+4)^2 - 1}{k+7}$ when $k = $ -2?

    A. -7

    B. $\dfrac{1}{3}$

    C. $\dfrac{3}{5}$

    D. 7