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.

\[
\frac{|2x - y|}{\sqrt{5x + 2y}} \quad \text{when} \quad x = 5 \quad \text{and} \quad y = -2
\]

His work is shown here.

\[
\begin{align*}
\frac{|2x - y|}{\sqrt{5x + 2y}} &= \frac{|2(5) - (-2)|}{\sqrt{5(5) + 2(-2)}} \\
&= \frac{|10 - 2|}{\sqrt{5(5) + 2(-2)}} \\
&= \frac{8}{\sqrt{5(5) + 2(-2)}} \\
&= \frac{8}{\sqrt{25 + 2(-2)}} \\
&= \frac{8}{5 + 2(-2)} \\
&= \frac{8}{5 - 4} \\
&= 8
\end{align*}
\]

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 $4n(n + 2)^3$ when $n = -8$?
   A. -2048
   B. -384
   C. 384
   D. 2048

4. What is the value of $\frac{p}{q-r}$ when $p = 3$, $q = 17$, and $r = 8$?
   A. 3
   B. 9
   C. 15
   D. 27

5. What is the value of $\frac{(k+4)^2 - 1}{k+7}$ when $k = -2$?
   A. -7
   B. $\frac{1}{3}$
   C. $\frac{3}{5}$
   D. 7