Order of Operations and Evaluating Expressions

PEMDAS

1) Parentheses (Grouping Symbols) → [], (), {}
2) Exponents
3) Multiply / Divide from Left to Right
4) Add / Subtract from Left to Right

Simplify each expression.

1) $3[10^2-(50-4+20)]$

$3[10^2-(46+20)]$

$3(10^2-66)$

$3(100-66)$

$3(34)$

$\boxed{102}$

2) $\dfrac{3^2+5^3}{(10-8)^2}$

$\dfrac{9+125}{2^2}$

$\dfrac{134}{4} = \boxed{33.5}$

Evaluate each expression for $a=5$, $b=10$, and $c=3$.

3) $3a^2-7b$

$3\cdot5^2-7\cdot10$

$3\cdot25-7\cdot10$

$75-70$

$\boxed{5}$

4) $\dfrac{5c+7a}{2b}$

$\dfrac{5\cdot3+7\cdot5}{2\cdot10}$

$\dfrac{15+35}{20} = \dfrac{50}{20} = \boxed{2\frac{1}{2}}$