

1.2 Review: Order of Operations and Simplifying Expressions

<p>Video Tutorial Review:</p> <p>P: Parenthesis (Any grouping symbol from inside out)</p> <p>E: Exponents</p> <p>M, D: multiplication + division from left to right</p> <p>A, S: Addition + subtraction from left to right</p>	<p>Evaluate the expression: $-1[-7+2(3+2)]-5^2$</p> $-1[-7+2(5)]-5^2$ $-1[-7+10]-5^2$ $-1[3]-25$ $-3-25$ $\boxed{-28}$
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Evaluate the following expressions, showing each step:

<p>1. $\frac{3}{5} + 48 \div 4^2$</p> $\frac{3}{5} + 48 \div 16$ $\frac{3}{5} + 3$ $\frac{3}{5} + \frac{15}{5} = \boxed{\frac{18}{5}}$	<p>2. $2^4 \cdot 4 - 2 \div 8$</p> $32 \cdot 4 - 2 \div 8$ $128 - \frac{1}{4}$ $\frac{512}{4} - \frac{1}{4} = \boxed{\frac{511}{4}}$	<p>3. $\frac{3}{4}[13-(2-3)]^2$</p> $\frac{3}{4}[13-(-1)]^2$ $\frac{3}{4}[13+1]^2$ $\frac{3}{4}(14)^2$ $\frac{3}{4} \cdot \frac{196}{1} = \boxed{147}$
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Evaluate the expression at the given value:

<p>4. $11+r^3-r^2-2r$ when $r=5$</p> $11+(5)^3-(5)^2-2(5)$ $11+125-25-10$ $136-25-10$ $111-10$ $\boxed{101}$	<p>5. $3(m^2-2)$ when $m=-4$</p> $3((-4)^2-2)$ $3(16-2)$ $3(14)$ $\boxed{42}$	<p>6. $\frac{k^2-1}{k+3}$ when $k=-5$</p> $\frac{(-5)^2-1}{(-5)+3}$ $\frac{25-1}{-2} = \frac{24}{-2} = \boxed{-12}$
<p>7. $\frac{-9x}{y^2-1}$ when $x=-3, y=-2$</p> $\frac{-9(-3)}{(-2)^2-1}$ $\frac{27}{4-1} = \frac{27}{3} = \boxed{9}$	<p>8. $\frac{y-x}{xy}$ when $x=-6, y=-2$</p> $\frac{-2-(-6)}{(-6)(-2)}$ $\frac{-2+6}{12} = \frac{4}{12} = \boxed{\frac{1}{3}}$	