

# Objective #1

## Order of operations

Simplify:

1.  $(21 + 8 \cdot 7 \div 8 - 42) \div -2$     [A] 7    [B] -33    [C] -1    [D] 167

Start with parenthesis  
multiplication and division first.  
 $(21 + 56 \div 8 - 42) \div -2$   
 $(21 + 7 - 42) \div -2$   
addition and subtraction next  
 $(28 - 42) \div -2$   
 $-14 \div -2 = 7$

2.  $-5(5 - (-3)) - (-5)(-4 - 8)$     [A] -50    [B] -100    [C] 420    [D] 20

parenthesis first  
 $-5(8) - (-5)(-12)$   
multiplication and division next.  
 $-40 - 60$   
addition and subtraction  
 $-100$

3.  $3 + 2(4 + 2)^2$     [A] 147    [B] 24    [C] 180    [D] 75

parenthesis first  
 $3 + 2(6)^2$   
exponents next  
 $3 + 2 \cdot 36$   
multiplication and division next  
 $3 + 72$   
addition and subtraction  
 $75$

4.  $\frac{-3}{-15} = \frac{4 + (-7)}{-7 - 8} \cdot \frac{(35 + (-40))}{(8 - 3)} = \frac{-5}{5}$     [A]  $\frac{1}{5}$     [B]  $-\frac{1}{5}$     [C] -6    [D] 6

$\frac{-3}{-15} \cdot \frac{-5}{5}$   
 $\frac{1}{5} \cdot \frac{-1}{1} = \frac{-1}{5}$