

Order of Operation

Unless told otherwise use

P lease	Parentheses
E xercise	Exponents
M y	Multiplication and Division (left to right)
D ear	
A unt	Addition and Subtraction (left to right)
S ally	

for parentheses inside parentheses work from the inside out

$5(3+2)^2$	$9/3 \cdot 3$	divide then	$9/(3 \cdot 3)$	multiply then
$= 5(5)^2$	$= 3 \cdot 3$	multiply	$= 9/9$	divide
$= 5(25)$	$= 9$		$= 1$	
$= 125$				

$4+5 \cdot 6$	multiply	$9(6+5)$	parentheses
$= 4+30$	Add	$= 9(11)$	multiply
$= 34$		$= 99$	

$2(3+5)+7 \cdot 4$	parentheses	$3 \cdot 4 \div 2 \cdot 7+5$	multiply
$= 2(8)+7 \cdot 4$	multiply	$= 12 \div 2 \cdot 7+5$	Divide
$= 16+28$	add	$= 6 \cdot 7+5$	Multiply
$= 44$		$= 42+5$	Add
		$= 47$	

$45-2^3 \cdot 3+7$	exponent		
$= 45-8 \cdot 3+7$	multiply		
$= 45-24+7$	subtract	note $45-24+7$	Associative
$= 21+7$	Add	$= 45-17$	Property
$= 28$		$= 28$	

$72 \div 2 \cdot 3+4 \cdot 2^3-3^3$	exponent
$= 72 \div 2 \cdot 3+4 \cdot 8-27$	Divide
$= 36 \cdot 3+4 \cdot 8-27$	Multiply
$= 108+32-27$	Add
$= 140-27$	Subtract
$= 113$	

Simplify the numerator and denominator separately
then divide if possible

$$\frac{2(7+8)+2}{3 \cdot 5 + 1}$$

Parentheses
multiply

$$= \frac{2(15)+2}{15+1}$$

Multiply
Add

$$= \frac{30+2}{16}$$

Add

$$= \frac{32}{16}$$

Divide / Simplify

$$= 2$$