

## Today's Plan:

**Learning Target (standard):** I will graph polynomial functions using transformations and the 5-step process.

**Students will:** Complete practice problems over previous concepts at the boards, put up homework problems on the board and make necessary corrections to their own work, and take a quiz on polynomial graphs.

**Teacher will:** Provide practice problems over previous concepts, check homework problems for accuracy and provide students feedback, describe and provide quiz problems.

**Assessment:** Board work, homework check and quiz

**Differentiation:** Students will work at the board, go over and correct homework at their seats, actively engage in quiz problems.



Go over your 5-step process with  
someone around you!

56) c, e & f

58) d & f



58)

① degree: @ least 4 and even  
MTP: @ least 3 and odd  
 $I_x: (-1, 0), (1, 0), (2, 0)$   
 $I_y: (0, 1)$

② zeros:  $x = -1$  mult. odd  $\rightarrow$  crosses x-axis  
 $x = 1$  mult. even  $\rightarrow$  touches x-axis  
 $x = 2$  mult. odd  $\rightarrow$  crosses x-axis

③ EB:  $f(x) = ax^n$   
 $n$  is even  
 $a(-)$   
down on left  
down on right

④

$x+1$	-	0	+	+
$(x-1)^2$	+	+	0	+
$x-2$	-	-	-	+
test	-2	-1	0	3
$f(x)$	below	above	above	below

d, f

Graph using the 5-step process:

$f(x) = x(x-2)(x+4)$

1) degree: 3  
MTP: 2  
 $I_x: (0, 0), (2, 0), (-4, 0)$   
 $I_y: (0, 0)$

2) zeros:  
 $x = 0$  mult. 1  $\rightarrow$  crosses x-axis  
 $x = 2$  mult. 1  $\rightarrow$  crosses x-axis  
 $x = -4$  mult. 1  $\rightarrow$  crosses x-axis

3) EB:  $f(x) = x^3$   
down on left  
up on right

4)

$x$	-	-	0	+	+		
$x-2$	-	-	-	0	+		
$x+4$	0	+	+	+	+		
test	-5	-4	-1	0	1	2	3
point(s, y)	(-5, -35)	(-1, 9)	(1, -5)	(3, 21)			
$f(x)$	below	above	below	above			

5b) c, e, f  
58) d, f