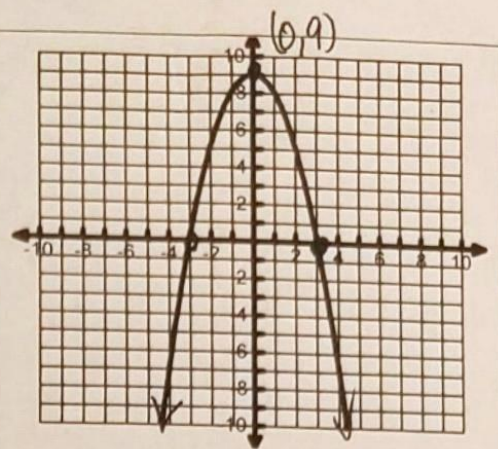


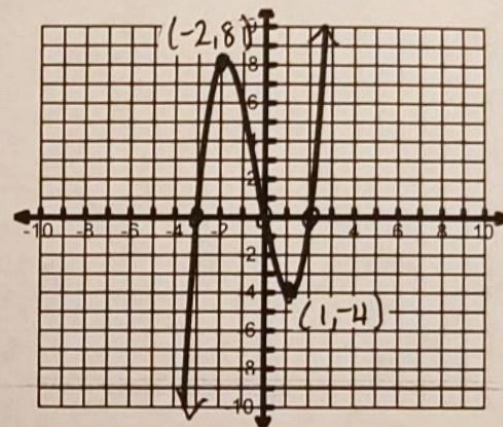
①

Degree	2, Quadratic	Absolute Maximum	(0, 9)
Domain	(∞ , ∞)	Relative Maximum	(0, 9)
Range	(∞ , 9]	Absolute Minimum	None
y-intercept	(0, 9)	Relative Minimum	None
x-intercept(s)	(-3, 0) & (3, 0)	Interval of Increase	(∞ , 0)
Left end behavior	As $x \rightarrow -\infty, y \rightarrow -\infty$	Interval of Decrease	(0, ∞)
Right end behavior	As $x \rightarrow \infty, y \rightarrow -\infty$	Symmetry (even, odd, Neither)	E



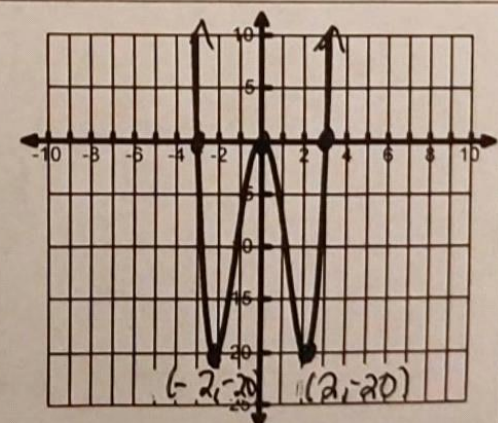
②

Degree & Name	3, Cubic	Absolute Maximum	None
Domain	(∞ , ∞)	Relative Maximum	(-2, 8)
Range	(∞ , ∞)	Absolute Minimum	None
y-intercept	(0, 0)	Relative Minimum	(1, -4)
x-intercept(s)	(-3, 0), (0, 0), (2, 0)	Interval of Increase	(∞ , -2) & (1, ∞)
Left end behavior	As $x \rightarrow -\infty, y \rightarrow -\infty$	Interval of Decrease	(-2, 1)
Right end behavior	As $x \rightarrow \infty, y \rightarrow \infty$	Symmetry (even, odd, Neither)	N



③

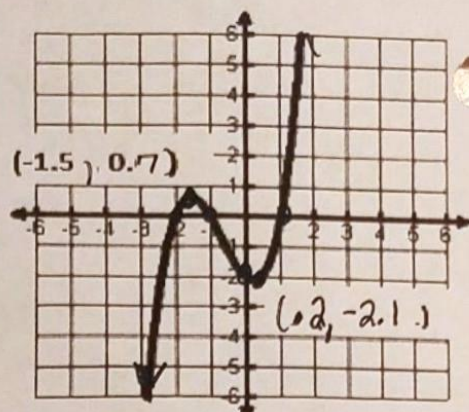
Degree & Name	4, Quartic	Absolute Maximum	None
Domain	(∞ , ∞)	Relative Maximum	(0, 0)
Range	(∞ , -20]	Absolute Minimum	(-2, -20) & (2, -20)
y-intercept	(0, 0)	Relative Minimum	(-2, -20) & (2, -20)
x-intercept(s)	(-3, 0), (0, 0), (2, 0), (3, 0)	Interval of Increase	(-2, 0) & (2, ∞)
Left end behavior	As $x \rightarrow -\infty, y \rightarrow \infty$	Interval of Decrease	(∞ , -2) & (0, 2)
Right end behavior	As $x \rightarrow \infty, y \rightarrow \infty$	Symmetry (even, odd, Neither)	E



4

Degree & Name	3, Cubic	Absolute Maximum	None
Domain	$(-\infty, \infty)$	Relative Maximum	$(-1.5, 0.7)$
Range	$(-\infty, \infty)$	Absolute Minimum	None
y-intercept	$(0, -2)$	Relative Minimum	$(2, -2.1)$
x-intercept(s)	$(-2, 0)$, $(-1, 0)$, $(1, 0)$	Interval of Increase	$(-\infty, -1.5)$ & $(2, \infty)$
Left end behavior	As $x \rightarrow -\infty, y \rightarrow -\infty$	Interval of Decrease	$(-1.5, 2)$
Right end behavior	As $x \rightarrow \infty, y \rightarrow \infty$	Symmetry (even, odd, Neither)	N

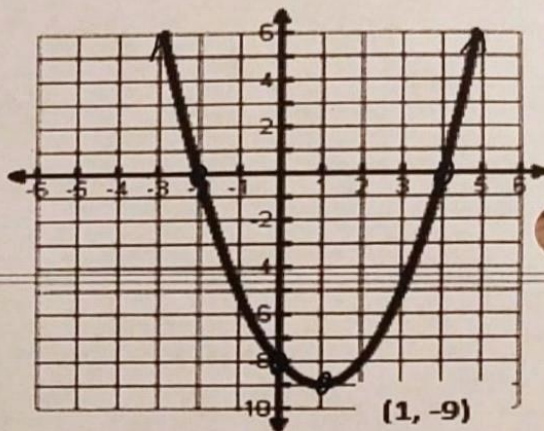
$$f(x) = x^3 + 2x^2 - x - 2$$



5

Degree & Name	2, Quadratic	Absolute Maximum	None
Domain	$(-\infty, \infty)$	Relative Maximum	None
Range	$[-9, \infty)$	Absolute Minimum	$(1, -9)$
y-intercept	$(0, 8)$	Relative Minimum	$(1, -9)$
x-intercept(s)	$(-2, 0)$, $(4, 0)$	Interval of Increase	$(1, \infty)$
Left end behavior	$\leftarrow \infty$	Interval of Decrease	$(-\infty, 1)$
Right end behavior	$\rightarrow \infty$	Symmetry (even, odd, Neither)	N

$$f(x) = x^2 - 2x - 8$$



6

Degree & Name	3, Cubic	Absolute Maximum	None
Domain	$(-\infty, \infty)$	Relative Maximum	$(-1.7, 9.5)$
Range	$(-\infty, \infty)$	Absolute Minimum	None
y-intercept	$(0, 8)$	Relative Minimum	$(2, 0)$
x-intercept(s)	$(-2, 0)$, $(2, 0)$, $(3, 0)$	Interval of Increase	$(-\infty, -1.7)$ & $(2, \infty)$
Left end behavior	As $x \rightarrow -\infty, y \rightarrow -\infty$	Interval of Decrease	$(-1.7, 2)$
Right end behavior	As $x \rightarrow \infty, y \rightarrow \infty$	Symmetry (even, odd, Neither)	N

$$f(x) = x^3 - 2x^2 - 4x + 8$$

