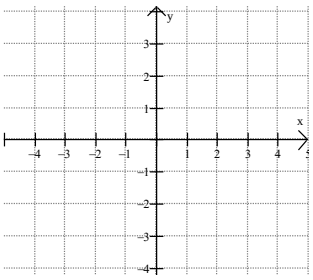
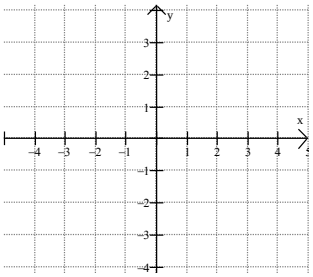
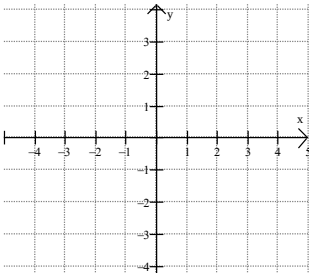
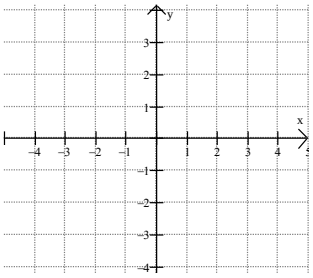
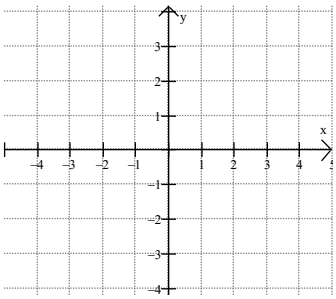
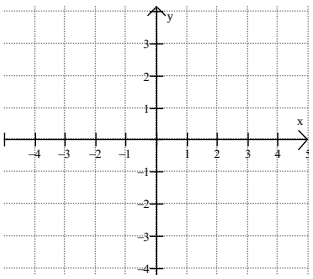
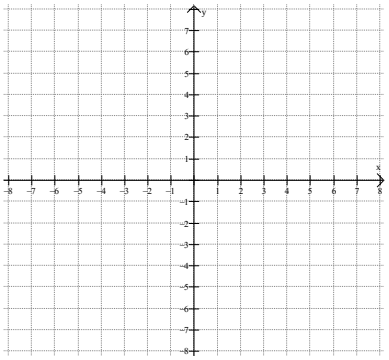
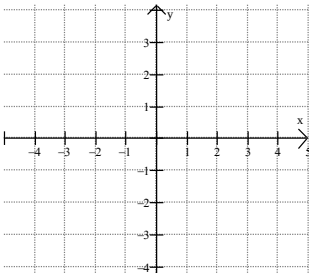
PARENT GRAPHS

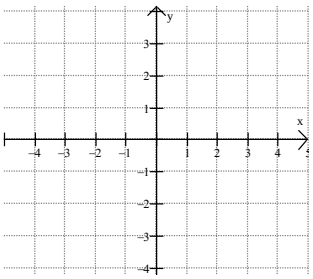
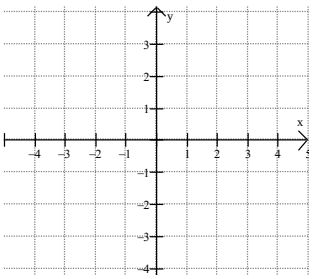
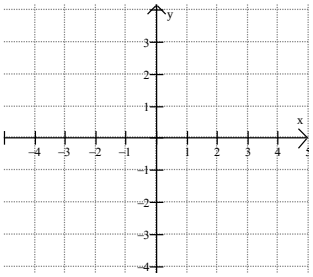
FUNCTION	TABLE OF VALUES	D/R/INT	GRAPH
Constant – Zero Slope $f(x)=2$ Standard form: $f(x)=a$	x | y	Domain: Range: y-intercept: x-intercept:	
Constant – Undefined Slope $x=2$ Standard form: $x=a$	x | y	Domain: Range: y-intercept: x-intercept:	
Linear $f(x)=x$ Standard form: $f(x)=mx+b$	x | y	Domain: Range: y-intercept: x-intercept:	
Absolute Value $f(x)=\|x\|$ Standard form: $f(x)=a\|x-h\|+k$	x | y	Domain: Range: y-intercept: x-intercept:	
Quadratic $f(x)=x^2$ Standard form: $f(x)=ax^2+bx+c$ Vertex form: $f(x)=a(x-h)^2+k$ Intercept form: $f(x)=a(x-p)(x-q)$	x | y	Domain: Range: y-intercept: x-intercept:	

FUNCTION	TABLE OF VALUES	D/R/INT	GRAPH
Radical – Square Root $f(x)=\sqrt{x}$ Standard form: $f(x)=a\sqrt{x-h}+k$	x | y	Domain: Range: y-intercept: x-intercept:	
Cubic $f(x)=x^3$ Standard form: $f(x)=ax^3+bx^2+cx+d$	x | y	Domain: Range: y-intercept: x-intercept:	
Rational $f(x)=\frac{1}{x}$	x | y	Domain: Range: y-intercept: x-intercept: Asymptotes:	

VOCABULARY

ASYMPTOTE:

- A line that a curve *approaches* but never reaches.
- Caused by an undefined solution
- Creates a barrier where the graph cannot cross
- Affects the domain and/or range of a function

FUNCTION	TABLE OF VALUES	D/R/INT	GRAPH
Exponential $f(x)=e^x$ Standard form: $f(x)=a(1\pm r)^t$	x | y	Domain: Range: y-intercept: x-intercept: Asymptotes:	
Natural Logarithmic $f(x)=\ln x$ Standard form: $f(x)=\ln x$	x | y	Domain: Range: y-intercept: x-intercept: Asymptotes:	
Logarithmic $f(x)=\log x$ Standard form: $f(x)=\log_b x$ Special Properties: $0=\log_b 1$ $1=\log_b b$	x | y	Domain: Range: y-intercept: x-intercept: Asymptotes:	
Logarithmic $f(x)=\log_4 x$ Standard form: $f(x)=\log_b x$ Special Properties: $0=\log_b 1$ $1=\log_b b$	x | y	Domain: Range: y-intercept: x-intercept: Asymptotes: