

4.4

Name _____ Date _____ Period _____

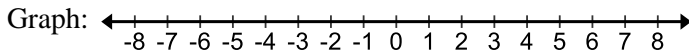
Key Features of Functions

Find the domain of each function algebraically. Write your answer in interval notation, set notation, and graph the domain on the number line provided.

1. $f(x) = \sqrt{x+3}$

Interval Notation:

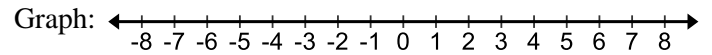
Set Notation:



2. $f(x) = x^2 + 2$

Interval Notation:

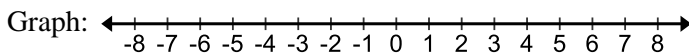
Set Notation:



3. $f(x) = \sqrt{1-x}$

Interval Notation:

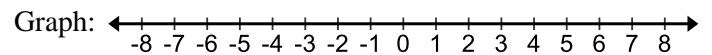
Set Notation:



4. $f(x) = \sqrt{3x+15}$

Interval Notation:

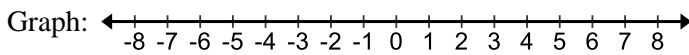
Set Notation:



5. $f(x) = \sqrt{x-4}$

Interval Notation:

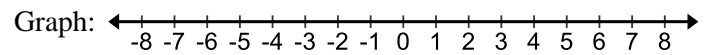
Set Notation:



6. $f(x) = -2(x+1) - 4$

Interval Notation:

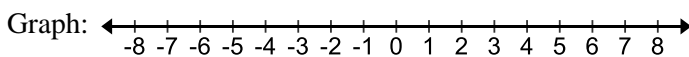
Set Notation:



7. $f(x) = (x-1)^3 + 5$

Interval Notation:

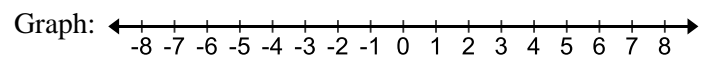
Set Notation:



8. $f(x) = \sqrt{-5+x}$

Interval Notation:

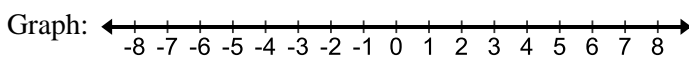
Set Notation:



9. $f(x) = \sqrt{12-3x}$

Interval Notation:

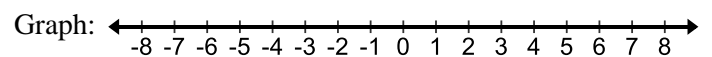
Set Notation:



10. $f(x) = (2x+1)\sqrt{3-x}$

Interval Notation:

Set Notation:

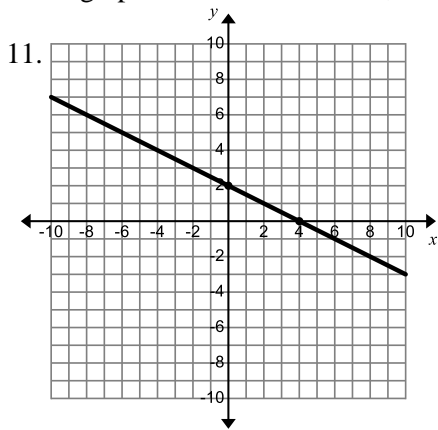


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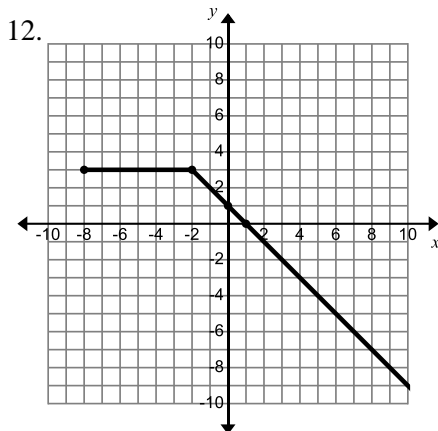
Key Features of Functions

Given the graphs of functions below, determine the key features.



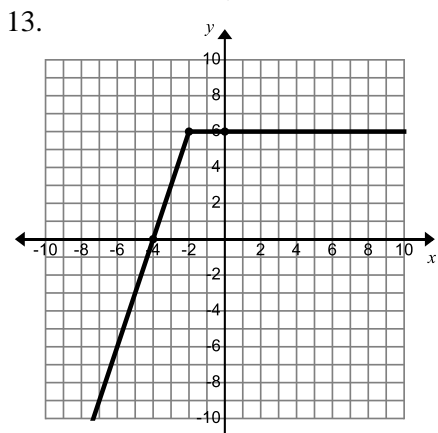
Domain:
Range:
 x -intercept(s):
 y -intercept:
Increasing:
Decreasing:
Constant:

Positive:
Negative:
Maximums / minimums:
Symmetry:
End Behavior:
 $\lim_{x \rightarrow -\infty} f(x) =$ $\lim_{x \rightarrow \infty} f(x) =$



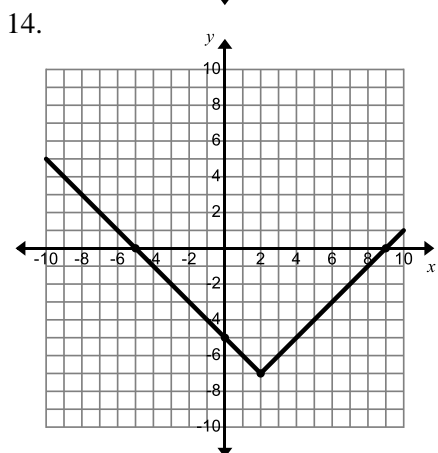
Domain:
Range:
 x -intercept(s):
 y -intercept:
Increasing:
Decreasing:
Constant:

Positive:
Negative:
Maximums / minimums:
Symmetry:
End Behavior:
 $\lim_{x \rightarrow -\infty} f(x) =$ $\lim_{x \rightarrow \infty} f(x) =$



Domain:
Range:
 x -intercept(s):
 y -intercept:
Increasing:
Decreasing:
Constant:

Positive:
Negative:
Maximums / minimums:
Symmetry:
End Behavior:
 $\lim_{x \rightarrow -\infty} f(x) =$ $\lim_{x \rightarrow \infty} f(x) =$



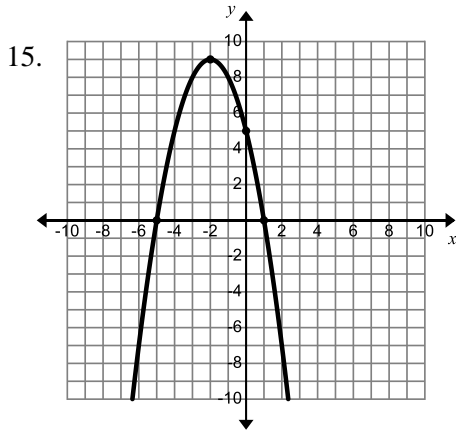
Domain:
Range:
 x -intercept(s):
 y -intercept:
Increasing:
Decreasing:
Constant:

Positive:
Negative:
Maximums / minimums:
Symmetry:
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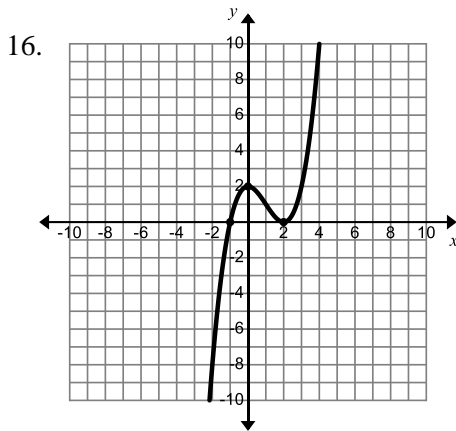
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Key Features of Functions



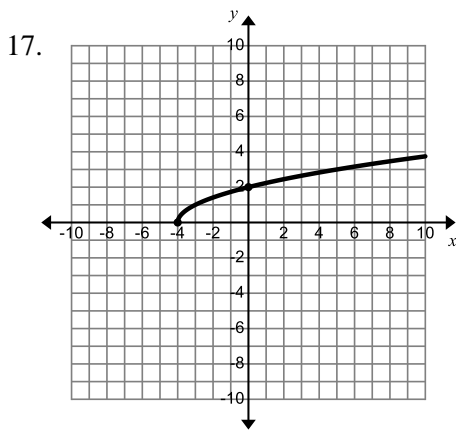
Domain:
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 x -intercept(s):
 y -intercept:
Increasing:
Decreasing:
Constant:

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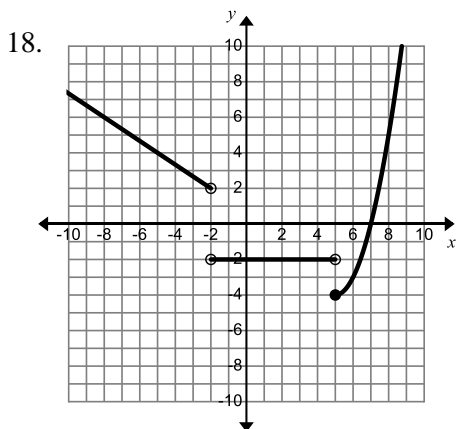
Domain:
Range:
 x -intercept(s):
 y -intercept:
Increasing:
Decreasing:
Constant:

Positive:
Negative:
Maximums / minimums:
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 y -intercept:
Increasing:
Decreasing:
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Negative:
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