Calculus Section 10.4 Polar Coordinates and Graphs

Rectangular coordinates are in the form .

Polar coordinates are in the form .

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Ex. 1 Graph the following polar coordinates:





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 In Precalculus you learned that:

  so *x* =

  so *y* =

 

  so *r* =

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Ex. Convert  to rectangular coordinates.

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Ex. Convert  to polar coordinates.

Ex. Convert the following equations to polar form.

(a) *y* = 4 (b) 

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Ex. Convert the following equations to rectangular form, and sketch the graph.

(a)  (b)  (c) 



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**CALCULUS**

To find the slope of a tangent line to a polar graph , we can use the facts that , together with the product rule:



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