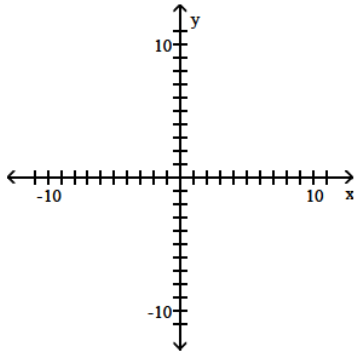
Parametric Coordinates and Equations …. Set 1

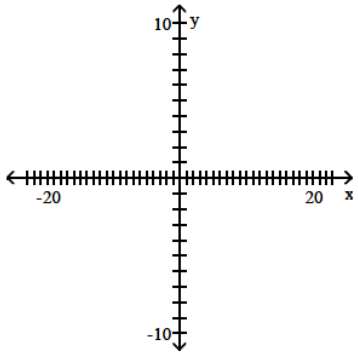
SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Graph the pair of parametric equations.

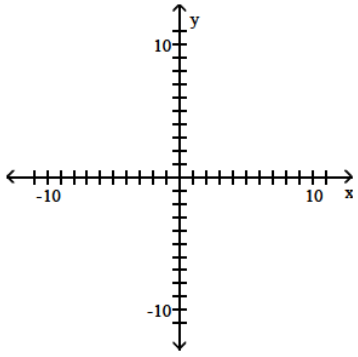
135) $x = 3t$, $y = t + 1$, $-2 \le t \le 3$



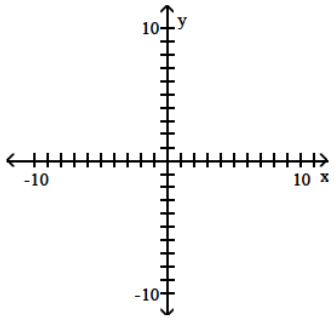
136) $x = t^2$, $y = \sqrt{t} + 2$, $0 \le t \le 4$



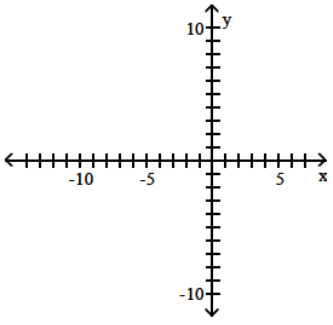
137) $x = 2 \sin t$, $y = 2 \cos t$, $0 \le t \le 2\pi$



138) $x = 5 \cos t$, $y = 2 \sin t$, $0 \le t \le \pi$



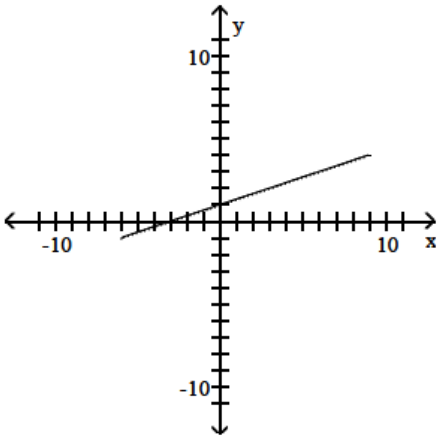
139) $x = 3t - 3$, $y = t^2 - 2$, $-4 \le t \le 4$



Parametric Coordinates and Equations …. Set 1

Answers

135)



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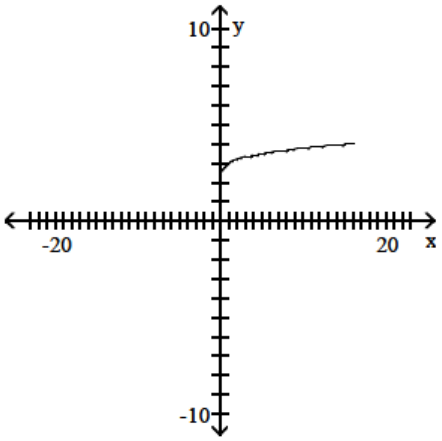
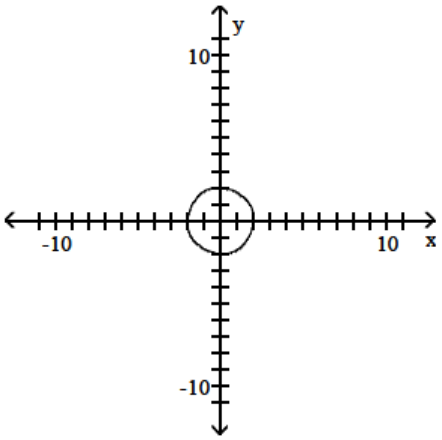


137)



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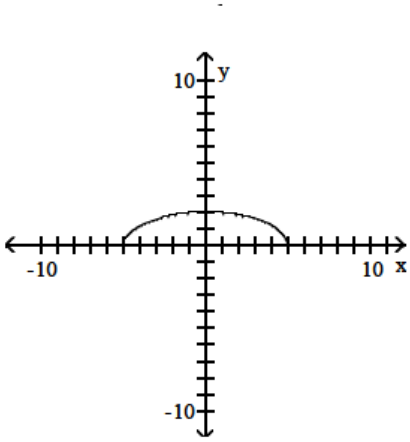

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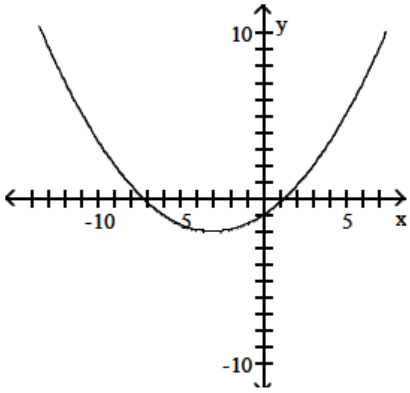


Parametric Coordinates and Equations …. Set 1

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Eliminate the parameter.

140) $x = 3t, y = t + 7$

A) $y = x/3 + 7$ B) $y = x/3 - 7$ C) $y = 3x - 7$ D) $y = 3x + 7$

141) $x = t + 4, y = t^2$

A) $y = x^2 + 16$ B) $y = \sqrt{x} + x + 4$ C) $y = \sqrt{x - 4}$ D) $y = x^2 - 8x + 16$

142) $x = t^2 + 1, y = t^2 - 1$

A) $y = x + 2, x \geq 1$ B) $y = x^2 - 2, x \geq 1$ C) $y = x^2 + 2, x \geq 1$ D) $y = x - 2, x \geq 1$

143) $x = t - 6, y = \dfrac{4}{t + 8}$

A) $y = \dfrac{4}{x + 8}$ B) $y = \dfrac{4}{x + 2}$ C) $y = \dfrac{4}{x + 14}$ D) $y = \dfrac{4}{-x + 14}$

144) $x = 3 \cos t, y = 3 \sin t$

A) $x^2 + y^2 = 3$ B) $y = x \tan t$ C) $x^2 + y^2 = 9$ D) $(x + y)^2 = 9$

Find the parametrization for the curve.

145) The line through the points (1, 2) and (5, −2)

A) $x = 4t + 5, y = 4t + 2$ B) $x = -8t - 1, y = 1t - 2$

C) $x = -4t - 1, y = 4t - 2$ D) $x = 4t + 1, y = -4t + 2$

146) The circle with center (9, 4) and radius 6

A) $x = 9 + 6t, y = 4 + 6t$, for $0 \leq t \leq 2\pi$

B) $x = 9 + 6 \cos t, y = 4 + 6 \sin t$, for $0 \leq t \leq 2\pi$

C) $x = -9 + 6 \sin t, y = -4 + 6 \cos t$, for $0 \leq t \leq 2\pi$

D) $x = 9 + 36 \cos t, y = 4 + 36 \sin t$, for $0 \leq t \leq 2\pi$

147) The portion of the circle $x^2 + y^2 = 2$ that lies in the second quadrant

A) $x = 2 \cos t, y = 2 \sin t$, for $\dfrac{3\pi}{2} < t < 2\pi$ B) $x = 2 \sin t, y = 2 \cos t$, for $\dfrac{\pi}{2} < t < \pi$

C) $x = 2 \cos t, y = 2 \sin t$, for $\dfrac{\pi}{2} < t < \pi$ D) $x = 2 \sin t, y = 2 \cos t$, for $\pi < t < \dfrac{3\pi}{2}$

Parametric Coordinates and Equations
…. Set 1

Answers

140) A

141) D

142) D

143) C

144) C

145) D

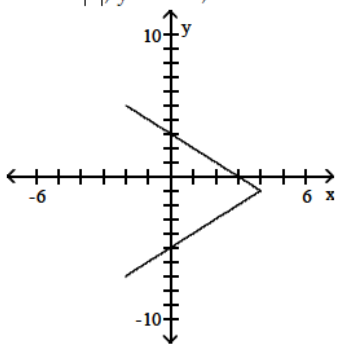
146) B

147) C

Parametric Coordinates and Equations
…. Set 1

Use the given graph to find the values of t that produce the graph in the given quadrant.

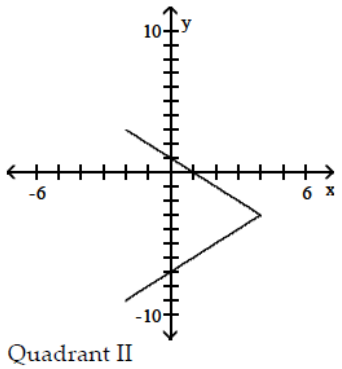
148) $x = 4 - |t|$, $y = t - 1$, $-6 \le t \le 6$



Quadrant I

A) $1 \le t \le 4$ B) $4 \le t \le 6$ C) $-4 \le t \le 1$ D) $-6 \le t \le -4$

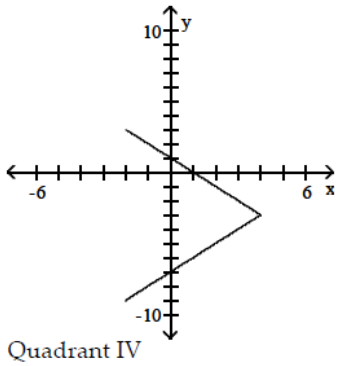
149) $x = 4 - |t|$, $y = t - 3$, $-6 \le t \le 6$



Quadrant II

A) $-6 \le t \le -4$ B) $3 \le t \le 4$ C) $4 \le t \le 6$ D) $-4 \le t \le 3$

150) $x = 4 - |t|$, $y = t - 3$, $-6 \le t \le 6$



Quadrant IV

A) $-4 \le t \le 3$ B) $3 \le t \le 4$ C) $-6 \le t \le -4$ D) $4 \le t \le 6$

Parametric Coordinates and Equations …. Set 1

Answers

148) A

149) C

150) A