

A2 Maths Test Eta Theta Version O

1 By writing $3\sin x - \cos x$ in the form $R\sin(x - \alpha)$, state the greatest value of the function and the smallest positive value of x (in radians to 2dp) at which this occurs.

2 $f(x) = 1 - \frac{1}{x+2}$

a) sketch $f(|x|)$

b) sketch $|f(x)|$

A2 Maths Test Eta Theta Version P

1 By writing $3\cos x - \sin x$ in the form $R\cos(x + \alpha)$, state the greatest value of the function and the smallest positive value of x (in radians to 2dp) at which this occurs.

2 $f(x) = 1 - \frac{1}{x+3}$

a) sketch $f(|x|)$

b) sketch $|f(x)|$

A2 Maths Test Eta Theta Version Q

1 By writing $3\sin x + \cos x$ in the form $R\sin(x + \alpha)$, state the greatest value of the function and the smallest positive value of x (in radians to 3dp) at which this occurs.

2 $f(x) = 1 - \frac{1}{x-2}$

a) sketch $f(|x|)$

b) sketch $|f(x)|$

A2 Maths Test Eta Theta Version R

1 By writing $3\sin 3x - 2\cos 3x$ in the form $R\sin(3x - \alpha)$, state the greatest value of the function and the smallest positive value of x (in radians to 3dp) at which this occurs.

2 $f(x) = 1 + \frac{1}{x+2}$

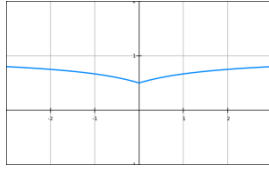
a) sketch $f(|x|)$

b) sketch $|f(x)|$

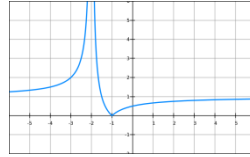
O Answers

1) $\sqrt{10}, 1.89$

2) a)



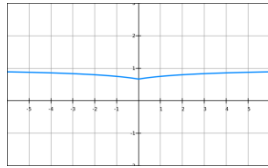
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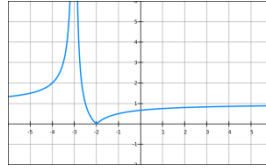
P Answers

1) $\sqrt{10}, 5.96$

2) a)



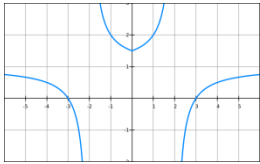
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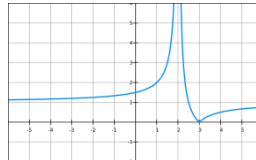
Q Answers

1) $\sqrt{10}, 1.25$

2) a)



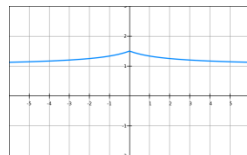
b)



R Answers

1) $\sqrt{13}, 0.720$

2) a)



b)

