***Solution Section* 6.3 – Trigonometric Functions**

***Exercise***

Find the six trigonometry functions of *θ*  if *θ* is in the standard position and the point (−2, 3) is on the terminal side of *θ*.

***Solution***



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***Exercise***

Find the six trigonometry functions of *θ*  if *θ* is in the standard position and the point (−3, −4) is on the terminal side of *θ*.

***Solution***



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***Exercise***

Find the six trigonometry functions of *θ*  in standard position with terminal side through the point (−3, 0).

***Solution***

 

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***Exercise***

Find the six trigonometry functions of *θ* if *θ* is in the standard position and the point (12, −5) is on the terminal side of *θ*.

***Solution***



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***Exercise***

Find the six trigonometry functions of *θ* if *θ*  is in the standard position and the point  is on the terminal side of *θ*.

***Solution***



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***Exercise***

Find the six trigonometry functions of *θ* if *θ* is in the standard position and the point  is on the terminal side of *θ*.

***Solution***



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***Exercise***

Find the six trigonometry functions of *θ* if *θ*  is in the standard position and the point  is on the terminal side of *θ*.

***Solution***



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***Exercise***

Find the six trigonometry functions of *θ* if *θ* is in the standard position and the point  is on the terminal side of *θ*.

***Solution***



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***Exercise***

Find the six trigonometry functions of *θ* if *θ* is in the standard position and the point  is on the terminal side of *θ*.

***Solution***



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***Exercise***

Find the six trigonometry functions of *θ* if *θ* is in the standard position and the point  is on the terminal side of *θ*.

***Solution***



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***Exercise***

Find the six trigonometry functions of *θ* if *θ* is in the standard position and the point  is on the terminal side of *θ*.

***Solution***



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***Exercise***

Find the six trigonometry functions of *θ* if *θ* is in the standard position and the point  is on the terminal side of *θ*.

***Solution***



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***Exercise***

Find the six trigonometry functions of *θ* if *θ* is in the standard position and the point  is on the terminal side of *θ*.

***Solution***



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***Exercise***

Find the six trigonometry functions of *θ* if *θ* is in the standard position and the point  is on the terminal side of *θ*.

***Solution***



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***Exercise***

Find the six trigonometry functions of *θ* if *θ* is in the standard position and the point  is on the terminal side of *θ*.

***Solution***



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***Exercise***

Find the six trigonometry functions of *θ* if *θ* is in the standard position and the point  is on the terminal side of *θ*.

***Solution***



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***Exercise***

Find the values of the six trigonometric functions for an angle of 90°.

***Solution***

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***Exercise***

Indicate the two quadrants *θ* could terminate in if 

***Solution***

 → ***Q***I & ***Q***IV

***Exercise***

Indicate the two quadrants *θ* could terminate in if 

***Solution***



 → ***Q***III & ***Q***IV

***Exercise***

Find the remaining trigonometric function of *θ* if  and *θ* terminates in ***Q***I

***Solution***



  

  

***Exercise***

Find the remaining trigonometric function of *θ* if and *θ* terminates in ***Q***II.

***Solution***





 



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***Exercise***

Find the remaining trigonometric function of *θ* if and *θ*  terminates in ***Q***III.

***Solution***







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***Exercise***

Find the remaining trigonometric function of *θ* if and *θ* terminates in **Q**IV.

***Solution***





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***Exercise***

Find the remaining trigonometric functions of *θ* if  and *θ* is terminates in ***Q***IV.

***Solution***



Since *θ* is ***Q***IV









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***Exercise***

Find the remaining trigonometric functions of *θ* if  and .

***Solution***













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***Exercise***

Find the remaining trigonometric functions of *θ* if 

***Solution***



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***Exercise***

Find the remaining trigonometric functions of *θ* if 

***Solution***





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***Exercise***

Find the remaining trigonometric functions of *θ* if 

***Solution***





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***Exercise***

Find the remaining trigonometric functions of *θ* if 

***Solution***





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***Exercise***

Find the remaining trigonometric functions of *θ* if 

***Solution***





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***Exercise***

Find the remaining trigonometric functions of *θ* if 

***Solution***





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***Exercise***

Find the remaining trigonometric functions of *θ* if 

***Solution***





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***Exercise***

Find the remaining trigonometric functions of *θ* if 

***Solution***





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***Exercise***

Find the remaining trigonometric functions of *θ* if 

***Solution***





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***Exercise***

Find the remaining trigonometric functions of *θ* if 

***Solution***





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***Exercise***

Find the remaining trigonometric functions of *θ* if 

***Solution***





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***Exercise***

Find the remaining trigonometric functions of *θ* if 

***Solution***





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***Exercise***

Find the remaining trigonometric functions of *θ* if 

***Solution***





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***Exercise***

If , and *θ*  is ***Q***III, find cos*θ* and tan*θ* .

***Solution***



 Since *θ* is Q III  





***Exercise***

If , and *θ* is ***Q***IV, find sin*θ* and tan*θ* .

***Solution***

 



***Exercise***

Use the reciprocal identities if  find 

***Solution***







***Exercise***

Find , given that 

***Solution***







***Exercise***

Find , given that 

***Solution***









***Exercise***

Use a ratio identity to find  if  and 

***Solution***

 



***Exercise***

If  and *θ* terminates in ***Q***II, find 

***Solution***









***Exercise***

If  and *θ* terminated in ***Q***II, find cos*θ* and tan*θ*.

***Solution***

 



***Exercise***

Find  if  and *θ* terminates in QI

***Solution***















***Exercise***

Find the remaining trigonometric ratios of *θ*, if  and 

***Solution***



















 



***Exercise***

Using the calculator and rounding your answer to the nearest hundredth, find the remaining trigonometric ratios of *θ* if and 

***Solution***

 

































***Exercise***

Write  in terms of sin*θ* and cos*θ*, and then simplify if possible.

***Solution***







***Exercise***

Write  in terms of sin*θ* and cos*θ*, and then simplify if possible.

***Solution***





***Exercise***

Write  in terms of sin*θ* and/or cos*θ*, and then simplify if possible.

***Solution***



***Exercise***

Write  in terms of sin*θ* and cos*θ*, and then simplify if possible.

***Solution***







***Exercise***

Multiply 

***Solution***





***Exercise***

Multiply 

***Solution***



***Exercise***

Simplify the expression  as much as possible after substituting  for *x*.

***Solution***











***Exercise***

Simplify the expression  as much as possible after substituting  for *x*

***Solution***













***Exercise***

Simplify by using the table. 

***Solution***





***Exercise***

Simplify by using the table. 

***Solution***







***Exercise***

Simplify by using the table. 

***Solution***







***Exercise***

Find the exact value of 

***Solution***

 







***Exercise***

Find *θ*  if  and *θ*  terminates in ***Q***III with.

***Solution***

 

*θ* ∈ ***Q***III





***Exercise***

Find *θ* to the nearest degree if  and *θ*  terminates in QIV with.

***Solution***





 



*θ* ∈ QIV





***Exercise***

Find the exact value of 

***Solution***









***Exercise***

Find the exact value of 

***Solution***

 





***Exercise***

Find the exact value of 

***Solution***

 





***Exercise***

Find the exact value of 

***Solution***



 







***Exercise***

Use the calculator to find the value of 

***Solution***





***Exercise***

Use the calculator to find the value of 

***Solution***





***Exercise***

Use the calculator to find the value of 

***Solution***







***Exercise***

Use the calculator to find *θ* to the nearest degree if  with *θ* ∈ QIV with 

***Solution***

 Since *θ* ∈ QIV







***Exercise***

Use the calculator to find *θ* to the nearest degree if  with *θ* ∈ ***Q***III with 

***Solution***

 Since *θ* ∈  ***Q***III







***Exercise***

Use the calculator to find *θ* to the nearest degree if  with *θ* ∈ ***Q***II with 

***Solution***





 Since *θ* ∈ ***Q***II







***Exercise***

Find *θ* to the nearest tenth of a degree if  and *θ*  terminates in ***Q***IV with.

***Solution***

 *θ* ∈ ***Q***IV







***Exercise***

Use the calculator to find *θ* to the nearest degree if  with *θ* ∈ ***Q***II with 

***Solution***

 *θ* ∈ ***Q***II





