***Solution*** ***Section* 6.1– Introduction**

***Exercise***

Indicate the angle if it is an acute or obtuse. Then give the complement and the supplement of each angle.

*a*) 10° *b*) 52° *c*) 90° *d*) 120° *e*) 150°

***Solution***

1. Acute;

Complement is 90° − 10° = 80°;

Supplement is 180° − 10° = 170°.

1. Acute;

Complement is 90° − 52° = 38°;

Supplement is 180° − 52° = 128°.

1. Neither (*right angle*);

Complement is 90° − 90° = 0°;

Supplement is 180° − 90° = 90°.

1. Obtuse;

Complement is 90° − 120° = −30°;

Supplement is 180° − 120° = 60°.

1. Obtuse;

Complement is 90° − 150° = −60°;

Supplement is 180° − 150° = 30°.

***Exercise***

Change to decimal degrees

|  |  |  |  |
| --- | --- | --- | --- |
| 1. 10° 45′ |  |  |  |

***Solution***

1. 10° 45′ = 10° + 45′







1. 







1. 







1. 





1. 







1. 







1. 







1. 







***Exercise***

Convert to degrees, minutes, and seconds.

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |

***Solution***

1. 











1. 











1. 











1. 











1. 









1. 











1. 











1. 











***Exercise***

Perform each calculation

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |

***Solution***

1. 



 

1. 



1. 



1. 



***Exercise***

Find the angle of least possible positive measure coterminal with an angle of

|  |  |  |
| --- | --- | --- |
| 1. −75° | 1. −800° | 1. 270° |

***Solution***

1. 
2. 
3. 

***Exercise***

A vertical rise of the Forest Double chair lift 1,170 *feet* and the length of the chair lift as 5,570 *feet*. To the nearest foot, find the horizontal distance covered by a person riding this lift.

***Solution***

*A*

*B*

*C*

1170

5570

*x*









***Exercise***

A tire is rotating 600 times per minute. Through how many degrees does a point of the edge of the tire move in  *second*?

***Solution***



***Exercise***

A windmill makes 90 *revolutions* per *minute*. How many revolutions does it make per *second*?

***Solution***



***Exercise***

Convert to radians

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |

***Solution***

1. 







1. 



1. 



1. 



1. 



***Exercise***

Convert to degrees

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |

***Solution***

1. 



1. 



1. 



1. 





1. 



1. 



1. 



1. 

