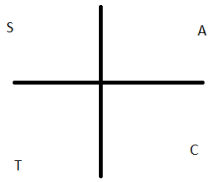
Using the CAST Rule and the Related Acute Angle
Trig Table – No Calculators

Use each trigonometric ratio to determine the Related Acute Angle.
Then use this to determine all values of θ, to the nearest degree if $0° < \theta < 360°$.

a) sin θ = -0.3256

1. **Determine** Related Acute Angle β

2. Use CAST to sketch β and $\theta's$

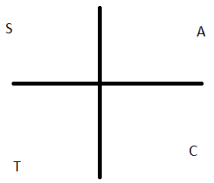


3. Determine θ_1 and θ_2

b) cos θ = - 0.7325

1. **Determine** Related Acute Angle β

2. Use CAST to sketch β and $\theta's$

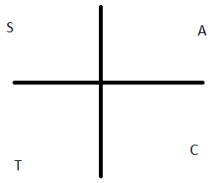


3. Determine θ_1 and θ_2

c) tan θ = -1.5

1. **Calculate** Related Acute Angle β

2. Use CAST to sketch β and $\theta's$

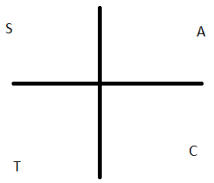


3. Determine θ_1 and θ_2

d) cos θ = 0.7777

1. **Calculate** Related Acute Angle β

2. Use CAST to sketch β and $\theta's$



3. Determine θ_1 and θ_2

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Solve for θ where $0 \le \theta \le 360$ by first calculating the Related Acute Angle β and then determine the value(s) of θ.

a) $\cos\theta = -0.8667$

b) $\sin\theta = -0.7234$

c) $2\sin\theta = -1$

d) $-5\cos\theta + 3 = 2$

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