Problem 1

Goal: Determine the number of revolutions that an angle that exceeds 360° represents

Goal: Determine the equivalent angle that lies in (0,360)

Process:

Step 1) Divide given angle by 360

Step 2) The quotient represents the number of rotations

Step 3) The remainder represents the coterminal angle that lies within (0,360)

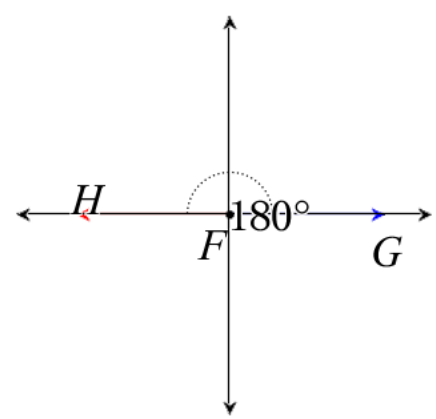
So $540°$ is $1\frac{1}{2}$ revolution and the coterminal angle is $180°$

	A	B
=		
1	angle	540
2		
3		
4		
5		
6		

B2

$$360\,\overline{)\,540}\quad 1\ r\ 180$$

$$\begin{array}{r} 540 \\ -360 \\ \hline 180 \end{array}$$



Goal: Determine the number of revolutions that an angle that exceeds 360° represents

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Process:

Step 1) Divide given angle by 360

Step 2) The quotient represents the number of rotations

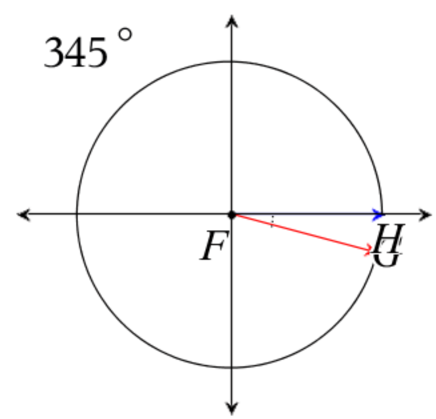
Step 3) The remainder represents the coterminal angle that lies within (0,360)

So $705°$ is $1\frac{23}{24}$ revolution and the coterminal angle is $345°$

	A	B
=		
1	angle	705
2		
3		
4		
5		
6		

B2

$$\begin{array}{r|l} & \;\;1 \;\; r \;\; 345 \\ \hline 360 & \;\;705 \\ & ^{-}360 \\ \hline & \;\;345 \end{array}$$



Problem 3

Goal: Determine the number of revolutions that an angle that exceeds 360° represents

Goal: Determine the equivalent angle that lies in (0,360)

Process:

Step 1) Divide given angle by 360

Step 2) The quotient represents the number of rotations

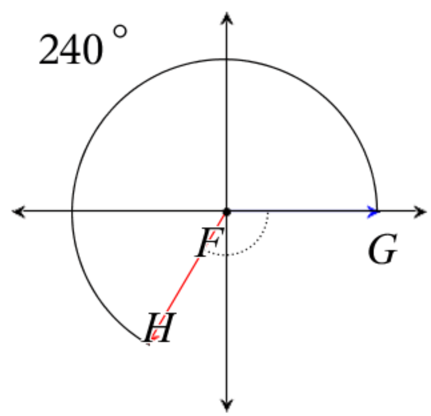
Step 3) The remainder represents the coterminal angle that lies within (0,360)

So $600\,°$ is $1\frac{2}{3}$ revolution and the coterminal angle is $240\,°$

	A	B
=		
1	angle	600
2		
3		
4		
5		
6		

B2

$$\begin{array}{r|l} & \;\;1 \quad r \;\; 240 \\ \hline 360 & \;\;600 \\ & {}^{-}360 \\ \hline & \;\;240 \end{array}$$



Problem 4

Goal: Determine the number of revolutions that an angle that exceeds 360° represents

Goal: Determine the equivalent angle that lies in (0,360)

Process:

Step 1) Divide given angle by 360

Step 2) The quotient represents the number of rotations

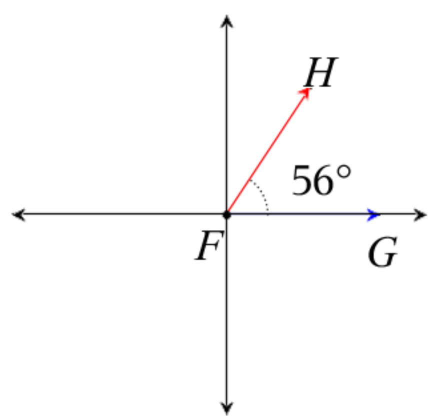
Step 3) The remainder represents the coterminal angle that lies within (0,360)

So $1856\,°$ is $5\frac{7}{45}$ revolutions and the coterminal angle is $56\,°$

	A	B
=		
1	angle	1856
2		
3		
4		
5		
6		

B2

$$\begin{array}{r|l} & \;\;5 \quad r\;\;56 \\ \hline 360 & \;\;1856 \\ & {}^{-}1800 \\ \hline & \;\;\;\;56 \end{array}$$



Problem 5

Goal: Determine the number of revolutions that an angle that exceeds 360° represents

Goal: Determine the equivalent angle that lies in (0,360)

Process:

Step 1) Divide given angle by 360

Step 2) The quotient represents the number of rotations

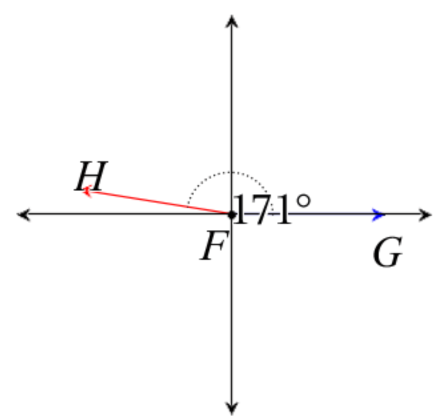
Step 3) The remainder represents the coterminal angle that lies within (0,360)

So 1971 ° is $5\frac{19}{40}$ revolutions and the coterminal angle is 171 °

	A	B
=		
1	angle	1971
2		
3		
4		
5		
6		

B2

$$\begin{array}{r|l} & \;\;\;\;5 \;\; r \;\; 171 \\ \hline 360 & 1971 \\ & {}^{-}1800 \\ \hline & \;\;\;171 \end{array}$$



Goal: Determine the number of revolutions that an angle that exceeds 360° represents

Goal: Determine the equivalent angle that lies in (0,360)

Process:

Step 1) Divide given angle by 360

Step 2) The quotient represents the number of rotations

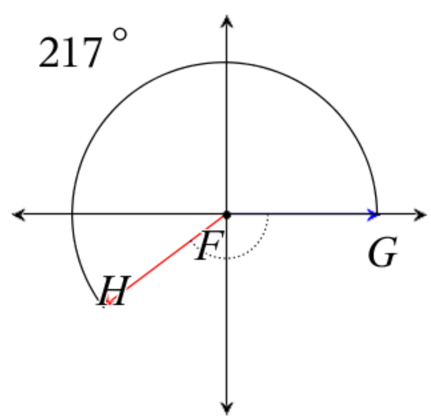
Step 3) The remainder represents the coterminal angle that lies within (0,360)

So $1657\,°$ is $4\,\frac{217}{360}$ revolutions and the coterminal angle is $217\,°$

	A	B
=		
1	angle	1657
2		
3		
4		
5		
6		

B2

$$
\begin{array}{r|l}
 & \;\;4 \quad r \;\; 217 \\
\hline
360 & \;\;1657 \\
 & {}^{-}1440 \\
\hline
 & \;\;\;217
\end{array}
$$



Problem 7

Goal: Determine the number of revolutions that an angle that exceeds 360° represents

Goal: Determine the equivalent angle that lies in (0,360)

Process:

Step 1) Divide given angle by 360

Step 2) The quotient represents the number of rotations

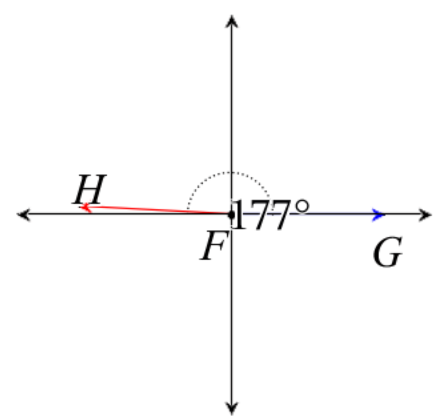
Step 3) The remainder represents the coterminal angle that lies within (0,360)

So $2697°$ is $7\frac{59}{120}$ revolutions and the coterminal angle is $177°$

	A	B
=		
1	angle	2697
2		
3		
4		
5		
6		

B2

$$\begin{array}{r|l} & \;\;7 \;\; r \;\; 177 \\ \hline 360 & \;\;2697 \\ & -2520 \\ \hline & \;\;\;\;177 \end{array}$$



Problem 8

Goal: Determine the number of revolutions that an angle that exceeds 360° represents

Goal: Determine the equivalent angle that lies in (0,360)

Process:

Step 1) Divide given angle by 360

Step 2) The quotient represents the number of rotations

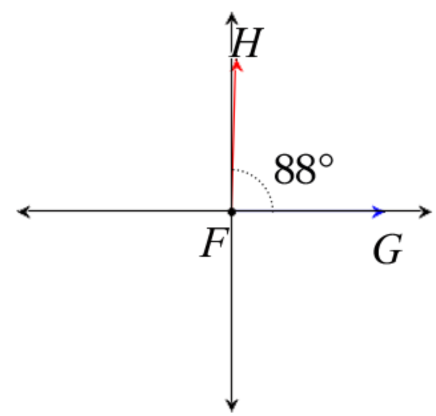
Step 3) The remainder represents the coterminal angle that lies within (0,360)

So $24568\,°$ is $68\frac{11}{45}$ revolutions and the coterminal angle is $88\,°$

	A	B
=		
1	angle	24568
2		
3		
4		
5		
6		

B1 24568

$$\begin{array}{r} 68 \; r \;\; 88 \\ 360 \,\overline{)\,24568} \\ {}^{-}24480 \\ \hline 88 \end{array}$$



Problem 9

Goal: Determine the number of revolutions that an angle that exceeds 360° represents

Goal: Determine the equivalent angle that lies in (0,360)

Process:

Step 1) Divide given angle by 360

Step 2) The quotient represents the number of rotations

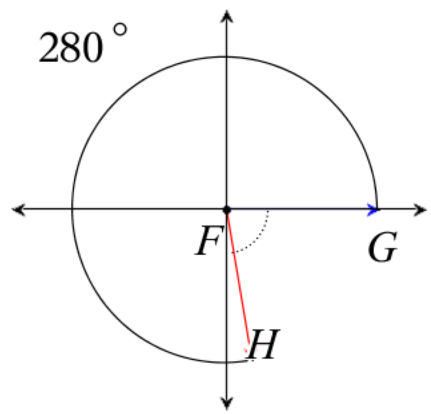
Step 3) The remainder represents the coterminal angle that lies within (0,360)

So $1000\,°$ is $2\frac{7}{9}$ revolutions and the coterminal angle is $280\,°$

	A	B
=		
1	angle	1000
2		
3		
4		
5		
6		

B2

$$\begin{array}{r|l} & \;\;2 \;\; r \;\; 280 \\ \hline 360 & \;\;1000 \\ & {}^{-}720 \\ \hline & \;\;\;280 \end{array}$$



Problem 10

Goal: Determine the number of revolutions that an angle that exceeds 360° represents

Goal: Determine the equivalent angle that lies in (0,360)

Process:

Step 1) Divide given angle by 360

Step 2) The quotient represents the number of rotations

Step 3) The remainder represents the coterminal angle that lies within (0,360)

So $2000\,°$ is $5\,\frac{5}{9}$ revolutions and the coterminal angle is $200\,°$

	A	B
=		
1	angle	2000
2		
3		
4		
5		
6		

B2

$$\begin{array}{r} 5 \;\; r \;\; 200 \\ 360 \overline{)\,2000} \\ {}^{-}1800 \\ \hline 200 \end{array}$$