1. Given angle θ , where $0^{\circ} \le \theta \le 360^{\circ}$, determine two possible values of θ where each ratio would be true. Sketch both principal angles.

(a) $\cos\theta = 0.6951$ (b) $\tan\theta = -0.7571$ (c) $\sin\theta = 0.3154$ (d) $\cos\theta = -0.2882$ (e) $\sin\theta = -0.7503$ (f) $\tan\theta = 1.3211$

2. For $\cos\theta = -\frac{5}{12}$, where $0^{\circ} \le \theta \le 360^{\circ}$

- (a) In which quadrant(s) could the terminal arm of θ be located?
- (b) Draw a diagram for each possible terminal arm, and determine x, y, and r for each diagram.
- (c) Determine the trigonometric ratios for θ (exact values only) for each terminal arm.
- (d) Determine all possible values of θ to the nearest degree.

3. For $\tan \theta = \frac{15}{9}$, where $0^{\circ} \le \theta \le 360^{\circ}$

- (a) In which quadrant(s) could the terminal arm of θ be located?
- (b) Draw a diagram for each possible terminal arm, and determine x, y, and r for each diagram.
- (c) Determine the trigonometric ratios for θ (exact values only) for each terminal arm.
- (d) Determine all possible values of θ to the nearest degree.

4. For $\sin \theta = -\frac{11}{20}$, where $0^{\circ} \le \theta \le 360^{\circ}$

- (a) In which quadrant(s) could the terminal arm of θ be located?
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Name:

Trigonometry in the Cartesian Plane - CAST Rule

Nov 20, 2013

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