

Name _____

Date _____

Year Group _____

Convert the following complex numbers in standard to trigonometric form and plot the point.
Show all steps. Answers $0^\circ \leq \theta \leq 360^\circ$. Round to the nearest tenth.

1. $3 + 2i$ 

$$r = \sqrt{a^2 + b^2}$$

$$\tan \theta = \frac{b}{a}$$

Steps => $r = \sqrt{\quad^2 + \quad^2}$

Steps => $\tan \theta = \frac{\quad}{\quad}$

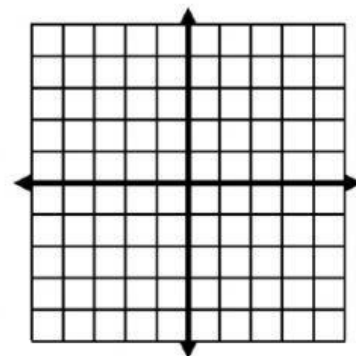
Steps => $r = \sqrt{\quad + \quad}$

Steps => $\theta = \tan^{-1}\left(\frac{\quad}{\quad}\right)$

Steps => $r = \sqrt{\quad}$

Steps => $\theta = \quad^\circ$

Answer => $\sqrt{\quad} * [\cos(\quad^\circ) + i * \sin(\quad^\circ)]$



Convert the following complex numbers in standard to trigonometric form and plot the point.
Answers $0^\circ \leq \theta \leq 360^\circ$. Round to the nearest tenth.

2. $5 - 3i$ 

Answer => $\sqrt{\quad} * [\cos(\quad^\circ) + i * \sin(\quad^\circ)]$

3. $-4 + 5i$ 

Answer => $\sqrt{\quad} * [\cos(\quad^\circ) + i * \sin(\quad^\circ)]$

4. $-3 - 3i$ 

Answer => $\sqrt{\quad} * [\cos(\quad^\circ) + i * \sin(\quad^\circ)]$

5. $-3\sqrt{2} + 4i$ 

Answer => $\sqrt{\quad} * [\cos(\quad^\circ) + i * \sin(\quad^\circ)]$

