9. \( x = (\cos 42.0^\circ)(13.4 \text{ m}) = 9.96 \text{ m} \)
\( y = (\sin 42.0^\circ)(13.4 \text{ m}) = 8.97 \text{ m} \)

10. \( x = (\cos 75.5^\circ)(275 \text{ mi}) = 68.9 \text{ mi} \)
\( y = (\sin 75.5^\circ)(275 \text{ mi}) = -266 \text{ mi} \)

11. \( x = (\cos 68.0^\circ)(48.6 \text{ km}) = -18.2 \text{ km} \)
\( y = (\sin 68.0^\circ)(48.6 \text{ km}) = -45.1 \text{ km} \)

12. \( x = (\cos 68.6^\circ)(9780 \text{ m}) = -3570 \text{ m} \)
\( y = (\sin 68.6^\circ)(9780 \text{ m}) = 9110 \text{ m} \)

13. \( x = (\cos 8.4^\circ)(98.5 \text{ km}) = 97.4 \text{ km} \)
\( y = (\sin 8.4^\circ)(98.5 \text{ km}) = -14.4 \text{ km} \)

14. \( x = (\cos 15.0^\circ)(48.5 \text{ ft}) = -46.8 \text{ ft} \)
\( y = (\sin 15.0^\circ)(48.5 \text{ ft}) = 12.6 \text{ ft} \)

15. \( x = (\cos 10.5^\circ)(38.9 \text{ m}) = 38.2 \text{ m} \)
\( y = (\sin 10.5^\circ)(38.9 \text{ m}) = 7.09 \text{ m} \)

16. \( x = (\cos 15.0^\circ)(478 \text{ ft}) = -462 \text{ ft} \)
\( y = (\sin 15.0^\circ)(478 \text{ ft}) = -124 \text{ ft} \)

17. \( x = (\cos 50.0^\circ)(9.60 \text{ km}) = 6.17 \text{ km} \)
\( y = (\sin 50.0^\circ)(9.60 \text{ km}) = -7.35 \text{ km} \)

18. \( x = (\cos 26.3^\circ)(5430 \text{ mi}) = -4870 \text{ mi} \)
\( y = (\sin 26.3^\circ)(5430 \text{ mi}) = 2410 \text{ mi} \)

19. \( x = (\cos 78.5^\circ)(29.5 \text{ m}) = -5.88 \text{ m} \)
\( y = (\sin 78.5^\circ)(29.5 \text{ m}) = 28.9 \text{ m} \)

20. \( x = (\cos 86.8^\circ)(154 \text{ mi}) = 8.60 \text{ mi} \)
\( y = (\sin 86.8^\circ)(154 \text{ mi}) = -154 \text{ mi} \)

21. \( R = \sqrt{(8.00 \text{ m})^2 + (6.00 \text{ m})^2} = 10.0 \text{ m} \)
\( \tan A = \frac{6.00 \text{ m}}{8.00 \text{ m}} \)
\( A = 36.9^\circ = \Theta \)

22. \( R = \sqrt{(-15.0 \text{ ft})^2 + (-45.0 \text{ ft})^2} = 47.4 \text{ ft} \)
\( \tan A = \frac{45.0 \text{ ft}}{15.0 \text{ ft}} \)
\( A = 71.6^\circ \)
\( \Theta = 180^\circ - 71.6^\circ = 251.6^\circ \)

23. \( R = \sqrt{(18.5 \text{ mi})^2 + (-18.5 \text{ mi})^2} = 26.2 \text{ mi} \)
\( \tan A = \frac{18.5 \text{ mi}}{18.5 \text{ mi}} \)
\( A = 45.0^\circ \)
\( \Theta = 360^\circ - 45.0^\circ = 315.0^\circ \)

24. \( R = \sqrt{(-16.5 \text{ in})^2 + (10.0 \text{ in})^2} = 19.3 \text{ in} \)
\( \tan A = \frac{10.0 \text{ in.}}{16.5 \text{ in.}} \)
\( A = 31.2^\circ \)
\( \Theta = 180^\circ - 31.2^\circ = 148.8^\circ \)

25. \( R = \sqrt{(-1.40 \text{ m})^2 + (9.60 \text{ m})^2} = 9.70 \text{ m} \)
\( \tan A = \frac{9.6 \text{ m}}{1.40 \text{ m}} \)
\( A = 81.7^\circ \)
\( \Theta = 180^\circ - 81.7^\circ = 98.3^\circ \)

26. \( R = \sqrt{(425 \text{ km})^2 + (-365 \text{ km})^2} = 560 \text{ km} \)
\( \tan A = \frac{365 \text{ km}}{425 \text{ km}} \)
\( A = 40.7^\circ \)
\( \Theta = 360^\circ - 40.7^\circ = 319.3^\circ \)

27. \( R = \sqrt{(19.5 \text{ m})^2 + (-49.6 \text{ m})^2} = 53.3 \text{ m} \)
\( \tan A = \frac{49.6 \text{ m}}{19.5 \text{ m}} \)
\( A = 68.5^\circ \)
\( \Theta = 360^\circ - 68.5^\circ = 291.5^\circ \)

28. \( R = \sqrt{(-158 \text{ km})^2 + (236 \text{ km})^2} = 284 \text{ km} \)
\( \tan A = \frac{236 \text{ km}}{158 \text{ km}} \)
\( A = 56.2^\circ \)
\( \Theta = 180^\circ - 56.2^\circ = 123.8^\circ \)