

Answers: Prerequisite Skills
Chapter 1

1. a) $x = 71^\circ$; acute isosceles
 b) $a = 113^\circ$; obtuse scalene
 c) $d = 27^\circ$; right scalene
 d) $y = 53^\circ$; acute scalene
2. a) 60° b) 36° c) 7° d) 82°
3. a) 166° b) 71° c) 133° d) 8°
4. a) 20.8 cm b) 2.2 m
5. a) $x = -85$ b) $x = 4.5$
 c) $a = 15$ d) $d = 8$
6. a) $x = 8$ b) $x = 6.3$
 c) $x = 2.4$ d) $x = 6.9, y = 3$
7. a) $\sin \theta = \frac{3}{5}, \cos \theta = \frac{4}{5}, \tan \theta = \frac{3}{4}$
 b) $\sin \theta = \frac{7}{25}, \cos \theta = \frac{24}{25}, \tan \theta = \frac{7}{24}$
 c) $\sin \theta = \frac{24}{\sqrt{937}}, \cos \theta = \frac{19}{\sqrt{937}}, \tan \theta = \frac{24}{\sqrt{937}}$
8. No. The angle is 82° .
9. a) $\angle A = 77^\circ, a = 95.2 \text{ m}, c = 72.6 \text{ m}$
 b) $d = 10.7 \text{ km}, \angle E = 31^\circ, \angle F = 54^\circ$
 c) $\angle M = 55^\circ, \angle N = 39^\circ, \angle P = 86^\circ$
10. 28°
 b) $150^\circ, 330^\circ$
 c) $\sin 210^\circ = -\frac{1}{2}, \cos 210^\circ = -\frac{\sqrt{3}}{2},$
 $\tan 210^\circ = \frac{1}{\sqrt{3}}$

