

Master 6.4 Answers to Line Masters 6.1 and 6.3

Master 6.1a

1. $\angle D \doteq 27^\circ$
2. $XY \doteq 14.7$ cm
3. $ST \doteq 10.9$ m
4. $\angle N \doteq 55^\circ$

Master 6.1b

1. approximately 8.0 m
2. approximately 30°
3. approximately 25 ft.
4. approximately 4°
5. approximately 45 cm

Master 6.3 Chapter Test

1. C
2. B

3. a) i) $\sin 45^\circ = \frac{1}{\sqrt{2}}$; $\cos 45^\circ = \frac{1}{\sqrt{2}}$; $\tan 45^\circ = 1$

ii) $\sin 180^\circ = 0$; $\cos 180^\circ = -1$; $\tan 180^\circ = 0$

iii) $\sin 210^\circ = -\frac{1}{2}$; $\cos 210^\circ = -\frac{\sqrt{3}}{2}$; $\tan 210^\circ = \frac{1}{\sqrt{3}}$

iv) $\sin 300^\circ = -\frac{\sqrt{3}}{2}$; $\cos 300^\circ = \frac{1}{2}$; $\tan 300^\circ = -\sqrt{3}$

b) i) $135^\circ, 225^\circ, 315^\circ$

ii) $0^\circ, 360^\circ$

iii) $30^\circ, 150^\circ, 330^\circ$

iv) $60^\circ, 120^\circ, 240^\circ$

4. a) $\theta \doteq 39^\circ, \theta \doteq 219^\circ$

b) $\theta = 0^\circ, \theta = 180^\circ, \theta = 360^\circ$

c) $\theta \doteq 112^\circ, \theta \doteq 248^\circ$

5. a) i) 2 triangles ii) 1 triangle iii) 1 triangle

b) ii) $\angle B \doteq 85.4^\circ, \angle C \doteq 44.6^\circ, AC \doteq 15.6$ cm

iii) $\angle B \doteq 55.8^\circ, \angle C \doteq 36.2^\circ, BC \doteq 16.9$ cm

6. approximately 13 km or 19 km

7. approximately 53.4 cm²

Master 6.4