

Test 4 Pretest, Chapter 8 **Answers**

1. $\mathbf{B} = \langle -54, 51 \rangle$ 2. $\mathbf{D} = \langle -30, -26 \rangle$ 3. $\mathbf{X} = -5\mathbf{i} + 15\mathbf{j}$ 4. $\mathbf{Z} = 2\mathbf{i} - 6\mathbf{j}$

5. $\mathbf{K} = \langle 8.0, 39.2 \rangle$

6. $\mathbf{L} = \langle -7.7, 2.2 \rangle$

7. $\mathbf{M} = \langle -14.2, -4.9 \rangle$

8. $\mathbf{N} = \langle 49.9, -25.4 \rangle$

9. $\theta = 12.5^\circ$

10. $\theta = 130.6^\circ$

11. $\theta = 213.7^\circ$

12. $\theta = 298.6^\circ$

13. $|\mathbf{V}| = \sqrt{241}$

14. $|\mathbf{V}| = \sqrt{85}$

15. $|\mathbf{V}| = \sqrt{100}$

16. $|\mathbf{V}| = \sqrt{136}$

$|\mathbf{W}| = \sqrt{106}$

$|\mathbf{W}| = \sqrt{10}$

$|\mathbf{W}| = \sqrt{225}$

$|\mathbf{W}| = \sqrt{306}$

$\mathbf{V} \cdot \mathbf{W} = -111$

$\mathbf{V} \cdot \mathbf{W} = 15$

$\mathbf{V} \cdot \mathbf{W} = 0$

$\mathbf{V} \cdot \mathbf{W} = -204$

$\alpha \approx 134^\circ$

$\alpha \approx 59^\circ$

$\alpha = 90^\circ$

$\alpha = 180^\circ$