

## Exercise Solution

1. The three generations of infantry tactics in modern warfare are:

- a. First generation: Smooth bore era line and column tactics.
- b. Second generation: Skirmisher or fire and movement tactics.
- c. Third generation: Defense in depth and infiltration tactics.

First generation tactics were similar to modern close order drill: dense formations of men, shoulder to shoulder, moving about the battlefield under control of their officer or NCO. Second generation tactics were extended linear tactics: close order formations spread out in open order skirmish lines. Third generation tactics spread out infantrymen both laterally and in depth. These tactics were no longer linear; to combat the effects of firepower, units using third generation tactics relied on both **ambiguity** and **speed**. (See pages 27-52.)

2. The infantry *formed square* to repel a cavalry charge. (See page 32 and fig 2-5.)

3. The rifled musket and breech-loading rifle gave the defender three new advantages: First, the rifled musket of the Civil War provided the defender with a much more accurate weapon than the smooth bore musket. Although previous versions of the rifled musket were accurate, their reliability and rate of fire were prohibitively low. This changed with the advent of the Minie bullet around 1850. Second, the breech loader allowed the defender to reload while lying down. This proved significant in the Austro-Prussian War of 1866 when Austrian close-ordered attacks against Prussians defending in the prone position failed miserably. Third, the breech-loader also gave the defender a high rate of fire. This allowed the defense to spread the line out since each rifleman could cover more frontage by fire. The combination of improved accuracy and rate of fire made no man's land prohibitively dangerous to infantryman deployed in dense formations. New tactics had to be developed. (See pages 35-36.)

4. From the Napoleonic wars to the Austro-Prussian War, there was a gradual decentralization in tactics and command and control. At Waterloo in 1815, the basic maneuver unit, commanded by a major or lieutenant colonel, was the battalion. By the Austro-Prussian War in 1866, improved weapons forced units to *spread out*; the battalion commander could no longer control his entire battalion. The company, commanded by a captain, became the basic maneuver unit. (See pages 39.)

5. Although defending the front trenchline in mass proved successful, casualties from enemy artillery became prohibitive in the Western Front's war of attrition. Consequently, both sides abandoned this practice in favor of dispersing troops in width and depth. (See pages 42- 43.)

6. The **outpost zone** provided early warning of major attacks. It contained squad-size strongpoints and counterattack forces to disrupt these attacks. The **battle zone** extended from the main line of resistance rearward to the artillery protective line. A battalion normally defended this zone with mutually supporting strongpoints and a company-size counterattack force. The **rear zone** extended from the artillery protective line rearward. Artillery units and higher headquarters usually deployed in this zone, as well as division-level counterattack forces. (See pages 43-45.)

9. With regard to German tactics developed during World War I, describe some new functions of supporting arms.

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5. Why did the Germans adopt a defense in depth doctrine in World War I?

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6. The German defense-in-depth doctrine of 1916 called for positioning forces in three successive zones. Describe each zone, the forces deployed within it, and the function of each force.

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7. Describe the new assault tactics developed in 1915 by the Rohr detachment.

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8. Explain why tactics and technology are closely related.

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### Chapter Exercise

1. List the three generations of infantry tactics in modern warfare. Briefly describe the tactics of each generation.

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2. In first generation tactics, why might the infantry *form square*?

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3. Why did the rifled musket and breech-loading rifle make close-order attacks obsolete?

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4. Why is the Austro-Prussian War sometimes referred to as the "Captains War"?

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## Chapter Review

Modern Warfare includes three generations of tactics. The first generation was the **tactics of line and column**. These tactics were similar to modern close order drill. Men moved about the battlefield in dense linear formations while under strict command of an officer or NCO. The basic infantry weapon of this era was the smooth bore musket. It was a crude weapon accurate only to a range of about 100 meters. The line infantryman was an automaton. The qualities that made him successful on the battlefield were **obedience and confidence**.

Second generation tactics were **skirmisher or fire and movement tactics**. Basically, these were a lateral extension of the Napoleonic line and column. The skirmish line advanced by fire and movement. The general trend during this period was one of decentralized command and control. Where the battalion was the basic maneuver unit in first generation warfare, the company was now generally recognized as such.

Third generation tactics were those of the **defense in depth and infiltration attack**. In the defense, the Germans (and the Allies as well) gradually abandoned the practice of defending with the bulk of their forces manning a front trench line. Instead, positions were sited in depth in three successive zones: the outpost, battle and rearward zones. Ideally, the main line of resistance was sited on a reverse slope. The key to the new style of defense was the **timely counterattack**.

In the attack, trench warfare magnified the problem created by improved weapons: how to get across no man's land when it was swept by artillery and machine fire from troops in strongly entrenched positions and protected by rows of barbed wire. The Germans developed new assault techniques in 1915 in raids with limited objectives: Specially trained assault forces in small columns used terrain and suppressive fire from machineguns mortars, artillery, and flamethrowers to breach enemy trench lines and roll them up with hand grenades. **Speed and stealth** became imperative for success. These techniques were refined in 1916 and 1917 and applied in large scale attacks at Caporetto and Cambrai in the fall of 1917 with excellent results. In the spring of 1918, the Germans embarked on a major offensive to drive the British out of the war. The new offensive doctrine called for specially trained assault units to infiltrate enemy weak spots and drive deep into his rear to disrupt and disorganize his defense. The tactics worked well, but, for a number of reasons, failed to obtain the operational and strategic results desired. Modern infantry tactics are rooted in German defense in depth and infiltration tactics.

36. Erwin Rommel, *Attacks*, (Vienna, Va. : Athena Press Inc., 1979), p. 13.
37. Gudmundsson, p. 16.
38. Timothy T. Lupfer, *The Dynamics of Doctrine: The Changes in German Tactical Doctrine During The First World War*, (Fort Leavenworth, Ks.: Combat Studies Institute, 1981), p. 3.
39. Lupfer, p. 7.
40. Lupfer, p. 12.
41. Lupfer, p. 12.
42. Lupfer, p. 22, and English, p. 15.
43. Lupfer, pp. 13-20, and English, p. 17.
44. Lupfer, pp. 15-16.
45. Lupfer, p. 30.
46. Gudmundsson, pp. 43-50.
47. Gudmundsson, pp. 67, 76.
48. Lupfer, p. 37.
49. Gudmundsson, pp. 118-121, 125-128.
50. Lupfer, p. 37.
51. Gudmundsson, pp. 129-131.
52. Gudmundsson, pp. 135-136.
53. Gudmundsson, pp. 142-144.
54. Lupfer, pp. 41-42.
55. Gudmundsson, p. 147.
56. Lupfer, pp. 49-54.
57. Lupfer, p. 44.
58. The idea of two major revolutions in infantry tactics was originated by Colonel M.D. Wyly, USMC.
59. Gudmundsson, p. 51, and Lupfer, pp.41-42.
60. Gudmundsson, pp. 19-20.
61. English, p. 20.
62. Steven L. Canby, "Light Infantry Perspective," (Unpublished paper, 1984), pp. 7-9.

**TABLE 2-1**  
**CHARACTERISTICS OF MODERN WARFARE**

	<b>FIRST GENERATION</b>	<b>SECOND GENERATION</b>	<b>THIRD GENERATION</b>
<i>Weapons</i>	muzzle-loaded, smooth bore musket and artillery	breech-loading rifle	automatic weapons modern artillery
<i>Tactical Dispersion</i>	close-order (line and column)	open order (extended line)	dispersed in width and depth
<i>Basic maneuver unit</i>	battalion	company	squad
<i>Attack</i>	en masse (volley fire)	line of skirmishers	infiltration
<i>Defense</i>	against infantry--line against cavalry--square	extended linear	defense in depth