

Basic Motorcycling Skills Student Booklet

*Be informed before
you decide to ride.*

National Motorcycle Training

Contents:

*** In your first session we will practice the techniques described through page 6. ***

Page 1	Some Comments on Risk Management Riding Gear
Page 2	Instructor Signals Riding Range Rules
Page 3	Primary Controls
Page 4	Mounting & Dismounting Riding Posture
Page 5	Other Controls & Starting the Engine Shifting Theory
Page 6:	Getting Underway Smoothly Efficient Stopping Technique
Page 7:	Turning: Leaning and Cornering Shifting While Moving
Page 8, 9, 10:	The Journey Ahead ... MC Licensing in CA



Edited
03.30.10

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Some Comments on Risk Management

How can I manage, and reduce, the risk involved with operating a motorcycle?

As with any sport, learn how to use the equipment of the sport. Then develop your skill through study and practice. Keep in mind your limits, and stay within your limits while participating in the sport. A fundamental principle used when reducing risk is to recognize times of increased risk. Learning to ride can be considered a time of increased risk.

There are three general periods in any sport, the Beginner's Time, the Learner's Time, and the On-going Time. Enjoying your Beginner's Time will help prepare you for your Learner's Time. Enjoying your Learner's Time will help prepare you for your On-Going Rider's Time!

In these practice sessions, we focus beginners on the basic physical skills required to operate a motorcycle with control. It will take more than beginner training to operate a motorcycle with control in traffic. However, by already being familiar with the basic physical skills before you take your motorcycle onto the street and into traffic can reduce some risks during your "learner's time".

We know that trying to learn the basic physical skills on a large, high-powered street motorcycle, while in traffic, is a high risk activity. These practice sessions were created to reduce that risk and make learning the basic skills fun!

To summarize: Recognize the risks; eliminate the unnecessary risks. Please remember that, "We cannot choose to be "safe" when operating a motorcycle; we can choose to... not be careless."

Risk management starts with preparation:

Riding and learning to ride takes mental and physical stamina. Prepare yourself mentally and physically. Be well rested and properly fed. Clear your mind of distractions, and make mental room for motorcycling tasks.

We do not encourage you to attempt any exercise that makes you uncomfortable. Please inform your instructor, at any time, if you are uncomfortable, or unsure of how to continue.

Motorcyclists are much more vulnerable to the environment than automobile operators. We can reduce some of our vulnerability through protective gear.

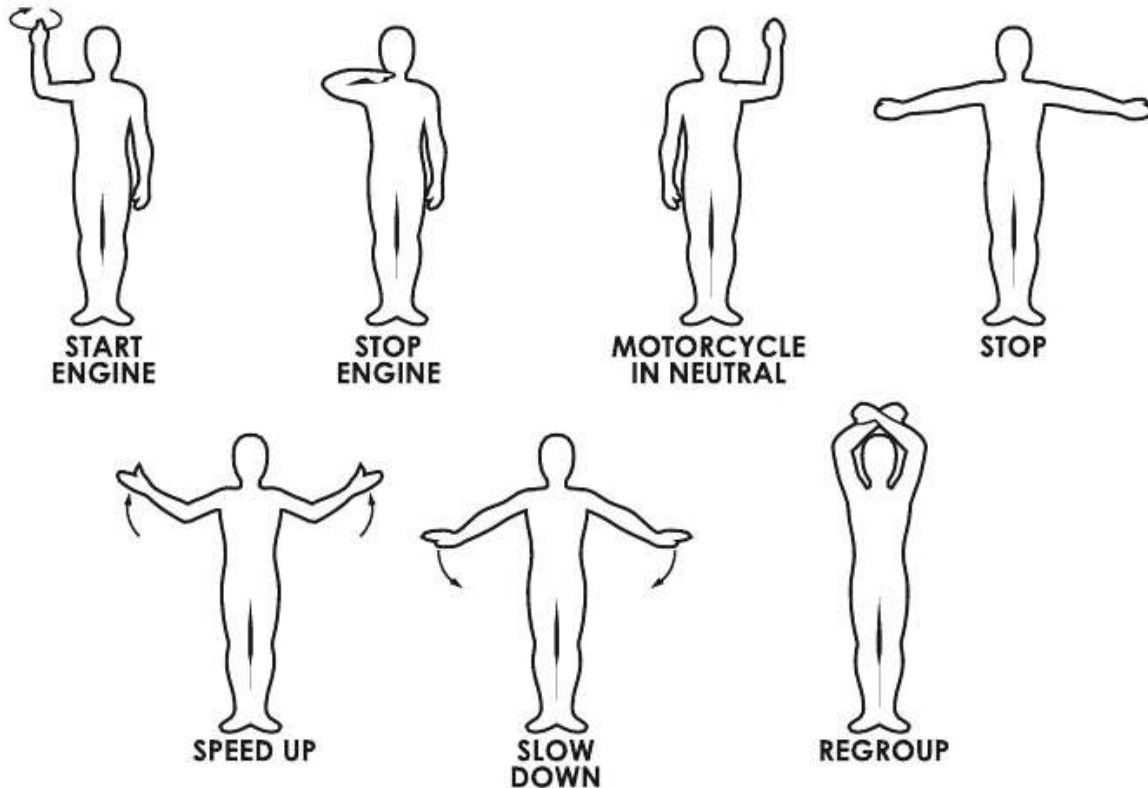
Required Riding Gear:

Sun glasses or regular glasses, long sleeved shirt, long pants, gloves, and athletic shoes or boots. Your gloves should be "full fingered" with a durable palm. Your clothes, including undergarments, should fit properly and comfortably.

We provide helmets. However, if you have a "full face" helmet and would like to use it, please show the instructor. If you do use your helmet, it must, at a minimum, meet current D.O.T. standards. While learning on our riding range, we require the "**full face**" type helmet that has the built in chin protector. Please note that the main function of the helmet is to protect the brain. There are many non-full face helmets that provide excellent brain protection.

Note: Whatever street riding helmet you choose, be sure it will protect your brain! Have a proper strap & clasp and the impact absorbing liner (inch thick "styrofoam" liner). We cannot overemphasize the measures taken in protecting your brain while participating in this sport.

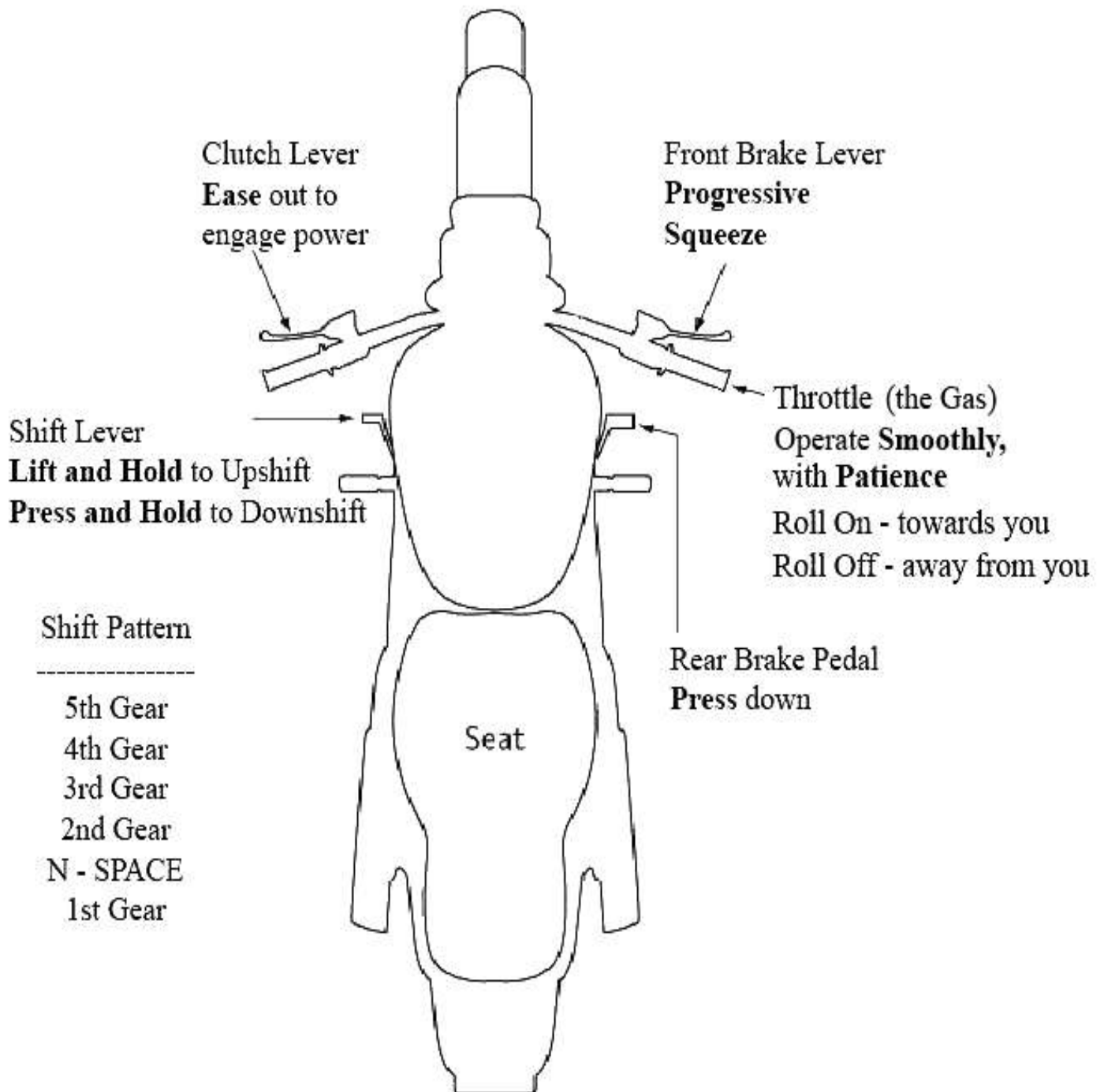
Instructor Signals



Riding Range Rules

1. Riding practice will be organized, supervised, and controlled by the instructor. Follow his/her directions.
2. Be certain you are wearing all the required protective equipment prior to mounting the motorcycle.
3. Know the location of the engine cut-off switch and how to use the switch.
4. Cover the clutch lever when practice riding. This will enable you to squeeze the lever immediately in case you need to quickly remove power from the rear wheel.
5. Keep the wrist down on the throttle hand.
6. Keep a reasonable margin of space between yourself and the rider in front of you. Interact with other riders carefully and courteously, without conflict.
7. If you have a mechanical problem with your motorcycle, immediately squeeze the clutch, and straddle-walk your motorcycle, out of the way of the other riders.
8. If an emergency arises, stop and wait for further instructions.
9. If you do not understand the instructor's directions, ask for further explanation before attempting to ride.
10. Do not attempt any riding exercise if you feel uncomfortable or unsafe.

The Primary Motorcycle Controls



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Getting Started

Basic Mounting Sequence:

Stand to the left of the motorcycle, by the sidestand.

Place both hands on handgrips and **squeeze the front brake**.

Swing right leg over saddle to other side and straighten motorcycle.

Sit, then **place sidestand in the up position**.

Basic Dis-Mounting Sequence:

Squeeze front brake lever.

Place sidestand in the out and forward position.

Check to make sure the sidestand is in the fully out and forward position.

Place your left foot on ground with adequate footing to support your weight.

Lean the motorcycle onto the sidestand and swing right leg over.

Leave the front wheel turned toward the sidestand.

Important hand positioning while learning to ride:

Cover the clutch at all times. Do not cover the front brake lever when not using the front brake.

When using the front brake lever, extend four fingers and squeeze with just your finger tips, then return them to the handgrip after braking is complete.

Do not hold onto the throttle tightly. Let your fingers curl around the grip without squeezing the grip. Place your wrist flat (horizontal) when the throttle is closed. As you roll on the throttle, your wrist must stay in the down position.

Motorcyclists hands must work independently. Notice that by practicing to cover the clutch while not covering the brake helps us in learning to control our hands independently as we are learning to ride.

Basic body posture while riding the motorcycle on our riding range:

Keep your head up. Look where you want to go.

Keep your shoulders relaxed and your elbows bent.

Sit forward on the saddle (slide towards the gas tank) while learning to ride.

Keep your **knees** against the tank and **ball** of the feet on the pegs.

Keeping your knees against the tank helps keep your body weight centered on the motorcycle. Additionally, use your knees to hold onto the motorcycle. This allows your hands to be relaxed enough to smoothly operate the controls.

Starting the Engine:

The following information is specific to our training motorcycles, which are typical motorcycles. The starter button is near your right thumb. It is a spring loaded contact switch. Press and hold the starter button to start the engine. Release button as soon as engine starts.

The engine cut-off switch is above the starter button. This switch gives you the option to “kill” the engine before taking a hand off the handlebar. For this course, use this switch when shutting off the engine.

The fuel valve is the silver lever located on the left side, and just below the gas tank. Turn the fuel on by turning the lever so the arrow points to "on". There are three fuel valve positions on these motorcycles: on, prime, and reserve. Leave the fuel valve in the “on” position.

The choke is used to help the engine start when it is cold. It is the brass lever, located on the carburetor, which is behind the fuel valve. The instructor will direct when to use the choke. The choke is off when the lever is in the horizontal position. It is on when it is slanted downward. After the engine is warm, the instructor will direct you to turn the choke off.

The ignition key is located at various locations. Rotate key fully counter clockwise for off. Rotate key clockwise one click for on.

Starting Notes:

- An instructor will direct when to turn the choke on, and off. The engine idles at a higher speed when the choke is on.
- The motorcycle can start if in gear. If you stall in gear, just squeeze the clutch and press the starter button.
- Typically we shift to neutral when the engine is cold to make it easier for the engine to start and to warm up. **Use the throttle with patience.**

Shifting

Shifting when the engine is off: Motorcycle transmissions are synchronized, so when the engine is off, move the shift lever **without squeezing the clutch**. To shift with the engine off, gently roll forward until motorcycle stops, then gently roll back until it stops. Roll to the midpoint; **lightly** lift and **hold** the shift lever to go up a gear, or **lightly** press and **hold** the shift lever to go down a gear. Gently roll the motorcycle while applying light toe pressure, the synchronizers will “click” in.

Shifting when the engine is running: Squeeze the clutch before moving the shift lever. Instead of rolling the motorcycle by pushing with your feet, use the **clutch** to gently roll the motorcycle. To synchronize when the engine is on, partially release and squeeze the clutch (wiggle the clutch lever). You will hear the synchronizer “click”.

Shifting Notes:

- The clutch needs to be released **less** than half way to move the synchronizers.
- The gentle “lift-and-hold” or “press-and-hold” of the shift lever is the same whether the engine is on or off.
- If you are in neutral and the lever does not move easily into gear, release the clutch all the way and then re-squeeze and try again.

Getting Underway Smoothly:

Squeeze the clutch and press down on the gear shift lever to select 1st gear.
Place both feet on the ground* and look well ahead, where you want to go.
In other words, get set, before you move.

Ease out clutch until you just feel the power engage, and **hold** it with your fingertips.
Open the throttle slightly, and hold for steady power.
Ease-out clutch slightly more and straddle walk as you start moving.

Continue to hold open the throttle and ease-out the clutch.
Place feet on pegs and lightly squeeze tank with your knees.
When your feet are on the pegs, the clutch is fully released.

Note: After you develop your skill, you will be able to bring your knees to the tank as the motorcycle begins to move, not needing many, or any straddle steps.

A Braking Technique for Efficient Stopping:

Keep your head up and your knees against the tank.
Close the throttle. Note that your wrist should be in the down or flat position before you extend your fingers to squeeze the brake.

Apply both brakes, at the same time.
Remember to progressively increase the squeeze pressure on the front brake lever,
and apply a controlled press to the rear brake pedal.

Squeeze the clutch, and keep it squeezed as you stop.
Press the shift lever if not already in first gear.
Place left foot down just before you stop.

Note: While squeezing the front brake lever, keep the throttle closed.

* Foot position for getting underway smoothly while starting on a **hill**: With both feet on the ground, apply front brake while you center yourself on the motorcycle. Once centered, carefully apply the rear brake with your right foot while balancing on your left foot. Release the front brake. Once you have engaged the clutch and are ready to move, release the pressure on the rear brake.

Controlling your direction is crucial in controlling a motorcycle. Directional control starts with where you are looking. If you want to go straight, look well ahead. If you want to go left, turn your eyes, then your head, and look left. If you want to go right, turn your eyes. Then your head, and look right. Practice turning your head and looking without turning your shoulders. Keep your body centered over the motorcycle by keeping both knees in, against the tank.

Turning

A motorcycle must “lean” (lean) to turn. Your turning radius, speed, and lean angle are related to each other. If you go through the same turn again, but at a higher speed, you will require more lean. If you go through sharper corners at the same speed, you will require more lean.

The effective way to control motorcycle lean is using countersteering.

Countersteer: Press forward left, lean left go left, press forward right, lean right go right. Let the bike lean beneath you.

Note: Both hands are on the handle bar, so pressing forward with one hand and pulling backward with the other hand has the same effect.

Motorcycles do not steer, motorcycles **must lean to turn**. To initiate the lean, a countersteer press is used. Let the bike lean beneath you.

Cornering Technique:

Use your brakes to slow to an appropriate entry speed before the turn. Release your brakes before you start to lean.

As you enter the turn, you should be already looking through the turn. First look to the exit, then as you approach the exit, look beyond the exit.

Now, as you let the bike lean beneath you, roll on the throttle and gently accelerate through the turn. Remember the sequence: ***Brake, Look, Roll***

Shifting While Moving:

For this course, the basic shifting-while-moving technique will emphasize smooth clutch release. We will focus on understanding the matching of engine speed to road speed using clutch release.

The sequence to upshift is:

- Close throttle & Squeeze clutch
- Lift and Hold shift lever until clutch is fully released
- Ease out clutch over half way, and briefly hold, then finish ease

The sequence to downshift is:

- Close throttle & Squeeze clutch
- Press and Hold shift lever until clutch is fully released
- Ease out clutch about half way, and briefly hold, then finish ease

Do not hurry the shifts, take your time with the sequence.

Note: To match road and engine speed while shifting, you may use the brakes to lower road speed and the throttle to increase engine speed. However, first master matching road speed and engine speed during a shift using only smooth clutch release. Using your brakes or throttle is not always available in all shifting situations, the clutch always is used for smooth shifting.

The Journey Ahead ...

Session 1 Wrap-up:

So, what is a motorcyclist? There may be many answers to that question. A possible answer is, "anyone who is interested in motorcycling", combined with, "a desire to develop knowledge and skill in operating and enjoying motorcycles."

It does not matter where you are in the motorcyclist's journey. You may be in an introduction to motorcycling course, or you may have been riding for fifty years, or anywhere in between. If you are interested in improving your skill, you are a motorcyclist.

So, try not to be in too big a hurry. Remember, all of your motorcycling education and experiences can be important and enjoyable.

This first session introduced beginner riders to motorcycling, and established the fundamental skills, on which all other skills will be built. Our motto is, "Be informed before you decide to ride." We hope you are now a more informed rider!

During the second and third practice sessions, we continue practicing the fundamentals. Then we introduce some more physical skills that are necessary when operating any type of motorcycle. By the end of Session 3 you will have practiced the basic physical skills used in controlling your speed and direction. Please be cautious as you enjoy using your new skills.

(Instructor: Hand out Reminder Cards & DMV booklets.) If you choose to pursue street riding, we recommend you complete the written test at the DMV for your learners permit as soon as you can. No appointment is necessary for the written test. Be sure to review counter-steering for leaning before your written test.

(Instructor review upcoming schedule with students.) We enjoyed introducing you to the sport of motorcycling! We look forward to riding with you again!

Session 2 Wrap-up:

We are sure you enjoyed adding more skills to your motorcycle "skills toolbox" today! Of course each part of the journey is important, and can be enjoyable.

In many sports, there are three periods, the beginner's time, the learner's time, and the on-going time. As you now know in motorcycling, the beginner's time is fun and exciting.

The best way to prepare for the street riding learner's time is to master the basic physical skills of controlling your speed and direction during your beginner's time. You have now been introduced to all the component skills of controlling your speed and direction. Please be cautious as you enjoy using your new skills.

In Session 3 we will review the skills we have learned and then use combinations of these component skills. For example, the skill of shifting-while-moving is a combination of throttle control, stability, clutch control, shifting the transmission, and turning, all skills you currently know!

Remember, in any sport, once you know how to practice, the best way to make skills "second nature" is to practice. As always, we encourage you to look for and eliminate the unnecessary risks along your motorcycling journey!

(Instructor: Review upcoming schedule for practice sessions.)

The Journey Ahead ...

Review begin2ride written evaluation sheet.

Session 3 wrap-up:

There are three general periods during your motorcycling journey: Beginner's Time, Learner's Time, and Ongoing Rider's Time. Your Beginner's Time is ending and your Learner's Time is beginning. Session 3 completes the introduction to the basic physical skills. Please know that while street riding, almost every action will be a combination of these basic skills, so make your basic skills "second nature" as quickly as you can.

So, what's next?

Our goal has been to provide you information, and physical understanding, of the basics of motorcycling. Our motto is, "Be informed **before** you decide to ride!" We do not promote motorcycling, we promote making informed choices.

People learn in different ways and at different rates. Also, all of us have different needs and wants. There is no exact path to follow when you are on your "journey". We know participating in sports exposes us to risk. We know that motorcycling is a risky activity. We have shared with you some of the ways to identify and eliminate some of the **unnecessary** risks.

If you decide to pursue street riding, a good next step would be to obtain your learner's permit, and a motorcycle. *Note that a good "starter-bike" is one that you can "out-grow"*. Also, the continue2ride program may be of interest to you. We rent "starter-bikes" so you can practice on an appropriate bike for your first couple of street rides. Please see the "I'm not a beginner" page on our website.

We encourage riders to enjoy their "*learner's time*". As you know, enjoying your beginner's time will help you eliminate some unnecessary risks during your learner's time; enjoying your learner's time will help eliminate some unnecessary risks during your ongoing rider's time.

Motorcycling is a big sport and there are many ways to participate. Continue your motorcycling education by: reading magazines and books about motorcycling; consider joining a good motorcycle club; participate in other training courses in street, track, and dirt riding, that interest you.

Congratulations on completing your beginner skills at the begin2ride sessions!

Enjoy the journey ...

begin2ride Written Evaluation

1. Why would you start with your wrist in the flat or down position when you are about to ride an unfamiliar motorcycle?

- a. To help reduce unexpected throttle roll-on during braking.
- b. If you are experienced, you do not have to concern yourself with this when on unfamiliar motorcycles.
- c. To help reduce the chance of unexpected throttle roll-on if the motorcycle lurches.
- d. Both a and c.

2. What is the first step to risk management?

- a. Wearing a helmet and proper gear.
- b. Doing a pre-ride check every time you ride.
- c. Recognize that there is risk.
- d. Both a and b.

3. How can you reduce your reaction time in braking?

- a. Cover the brake with your fingertips.
- b. Cover the clutch with your fingertips.
- c. Be thinking fast.
- d. Both b and c.

4. Why is it useful to approach street riding as a sport?

- a. It requires coordination.
- b. It requires mental skills that need to be practiced.
- c. It requires strength and stamina.
- d. It requires purposeful practice to develop physical and mental motorcycling skills.
- e. All the above.

5. How do you know if you are prepared for your ride?

- a. Check yourself that you are mentally alert and prepared for the motorcycling demands.
- b. Check yourself that you are physically prepared for the motorcycling demands.
- c. Be sure you use only your motorcycle.
- d. Both a and b.

6. How would you use the “fun factor” to reduce risk?

- a. Recognize motorcycling is fun and exciting.
- b. If you become unsure or uncomfortable, stop and change how you are participating.
- c. Ride with large groups of riders.
- d. Both a and c.

7. What is the proper number of straddle steps to use when getting underway?

- a. Three.
- b. As many as you need to be in control for the particular situation.
- c. New riders should take many steps and skilled riders should not take any steps.
- d. It depends if you are on a hill.

8. To stop in a short distance (a quick stop):

- a. squeeze the clutch quickly so you don't stall.
- b. use an intense, progressive squeeze on the front brake and moderately press on the rear brake.
- c. use both brakes with the same pressure.
- d. All of the above.

9. How do you get a motorcycle to turn?

- a. Look and steer in the direction of the turn.
- b. Always slow to turn.
- c. By leaning the motorcycle.
- d. Always press on the grip with your hand.

10. The word countersteering:

- a. can help you remember that motorcycles do not steer.
- b. is a made up word.
- c. is confusing because it means the same as steering.
- d. Works only at high speeds.