

Understanding time, speed, and space

Stopping Distances

What this skill is

Stopping distance is the total distance your car travels from the moment you recognise a hazard to the moment the car stops.

It is made up of two parts:

Thinking distance – how far the car travels while you see a hazard, process it, and decide to brake

Braking distance – how far the car travels once the brakes are applied

Together, these form your overall stopping distance.

This skill is about understanding why space matters, not memorising figures.



What This Handout Covers:

The key points we practise
in the car



Simple tips you can use
during private practice



Diagrams to help you
remember the basics



How to Use This Handout

This guide is designed to support what we practise together in the car. Use it to remind yourself of key points, build confidence, and help private practice. You don't need to memorise everything, we will revisit each skill as you progress.

Why stopping distances matter

Stopping distances explain why:

- higher speeds need much more space
- hazards appear “suddenly” at speed
- following too closely removes options
- slowing down early keeps situations manageable

At speed, small changes in reaction time or road conditions make a big difference.



Thinking Distance — The Hidden Part

Thinking distance begins before your foot reaches the brake.

It is affected by:

- how quickly you spot a hazard
- your level of attention
- fatigue or stress
- distractions
- visibility and lighting

Even when you are alert, the car continues to travel forward while your brain processes what it has seen.

This is why early observation matters just as much as braking ability.



Braking Distance — The Physical Part

Braking distance begins once the brakes are applied.

It is affected by:

- speed
- road surface (wet, icy, loose gravel)
- tyre condition
- brake condition
- vehicle weight

As speed increases, braking distance increases dramatically, not gradually.

Doubling speed more than doubles braking distance.

What the Infographics Show

The diagrams illustrate two important ideas:

1. Speed changes everything

As speed increases:

- thinking distance increases steadily
- braking distance increases much faster
- overall stopping distance grows quickly

This is why higher speeds demand much more space.

2. Five seconds disappears quickly

The “distance travelled in 5 seconds” graphic shows how far a car travels at constant speed with no hazard present.

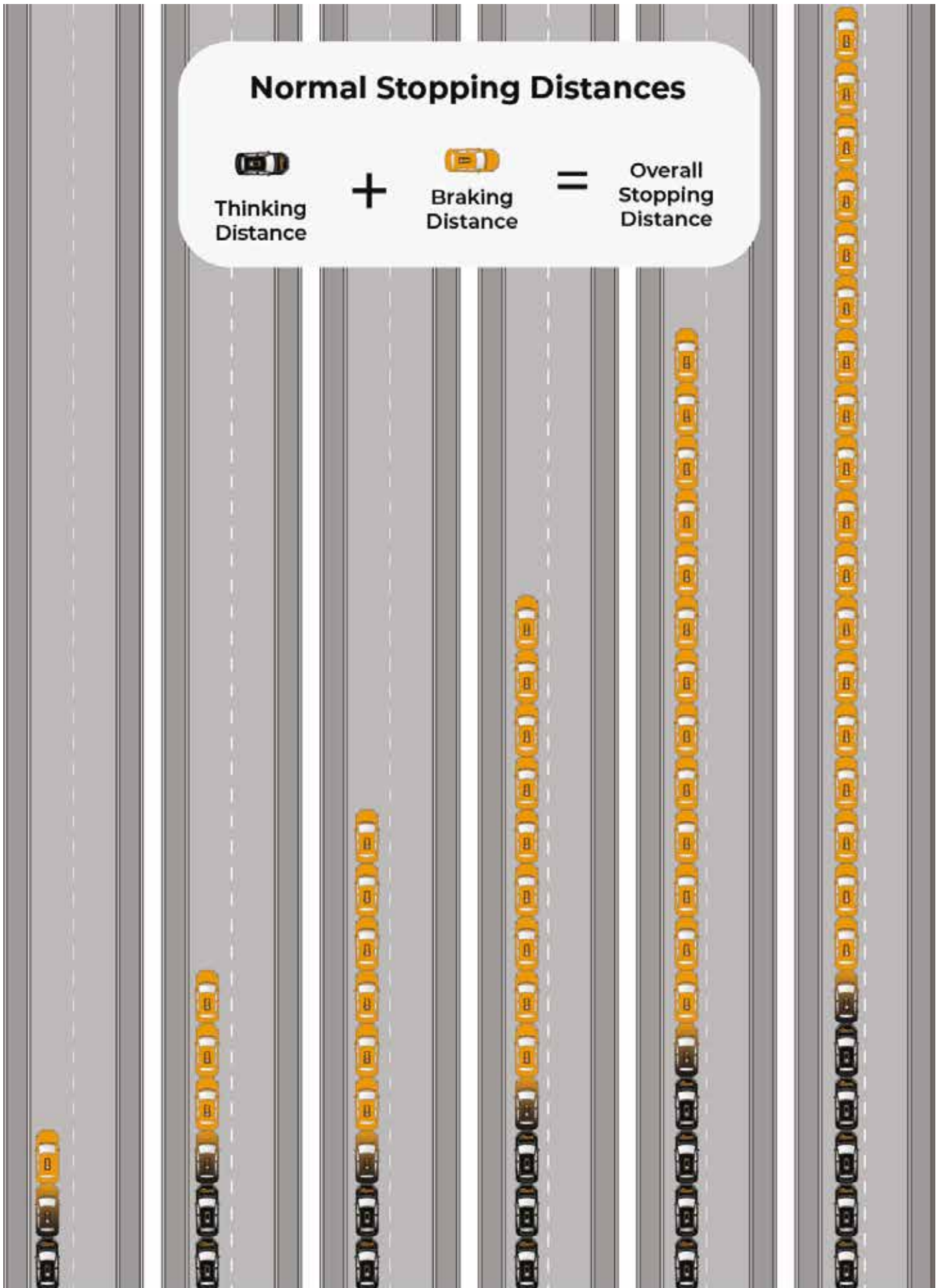
It helps visualise:

- how little time 5 seconds really is
- how far the car moves even when nothing goes wrong
- why hazards can appear sooner than expected

Normal Stopping Distances

 +  = Overall Stopping Distance

Thinking Distance + Braking Distance = Overall Stopping Distance



20

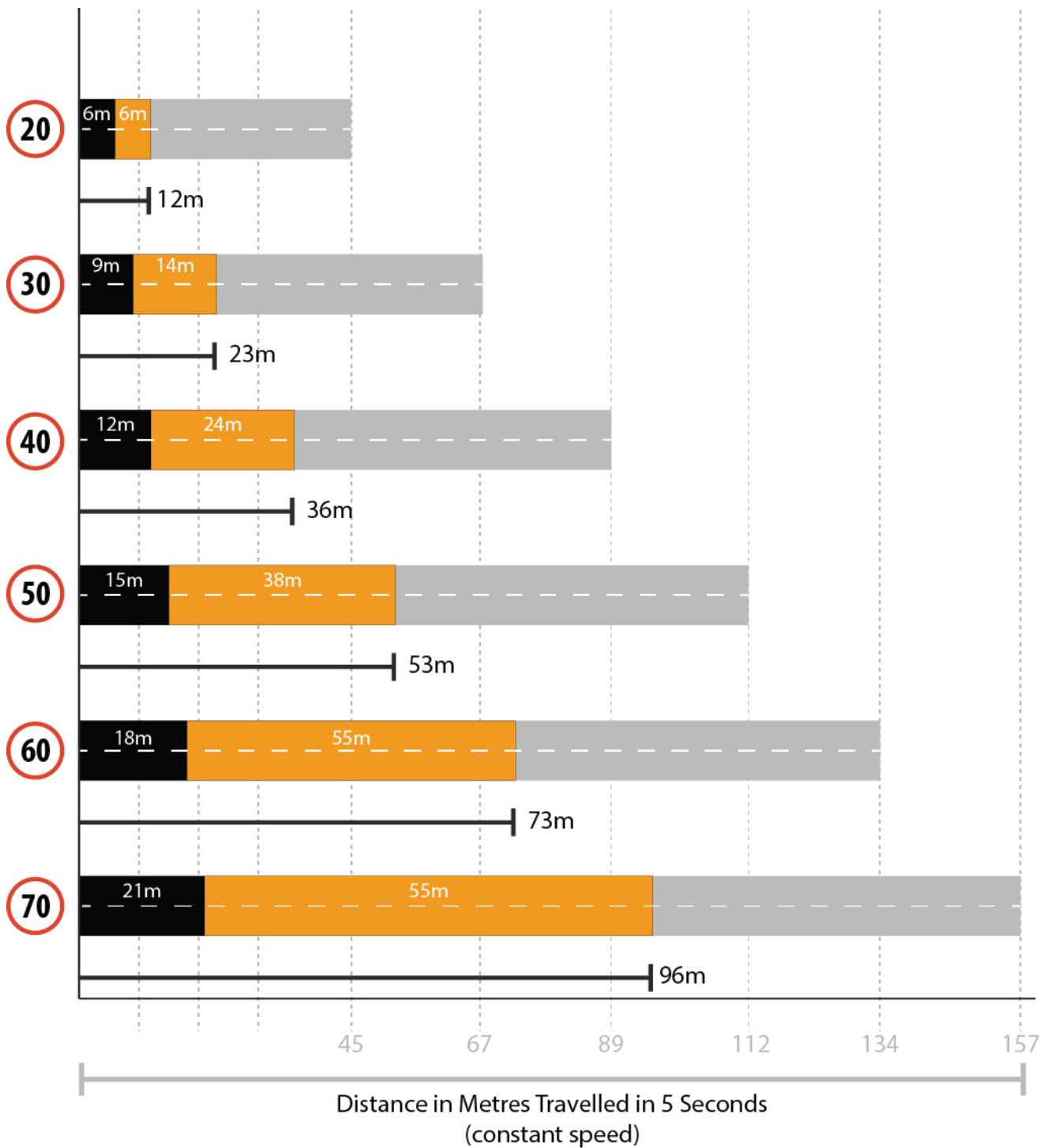
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Key

Thinking Distance + Braking Distance

Distance Travelled in 5 Seconds (constant speed - no hazards)

Overall Stopping Distance

Keep in Mind

Stopping distances are best-case estimates

Wet or icy roads increase braking distance significantly

Distraction increases thinking distance

Following too closely removes reaction time

You cannot brake your way out of poor observation

Space gives you options. Speed takes them away.

What This Means in Practice

Good drivers:

- leave larger gaps at higher speeds
- slow down earlier when visibility is limited
- adjust speed for weather and road conditions
- prioritise observation over reaction

You don't need to memorise distances — you need to understand the relationship between speed and space.

Final Thought

Stopping distance isn't about numbers on a chart.

It's about time to think and space to act.

By managing speed and keeping safe following distances, you give yourself the best chance to respond calmly and safely when something changes ahead.

This understanding sits at the heart of safe driving — and underpins everything else you learn.

Notes / Questions

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