

## Caravan Towing Theory Test - Answers

1: What do the following abbreviations mean:

**ATM:** (c) Aggregate Trailer Mass

**GTM:** (b) Gross Trailer Mass

(Tow vehicle) **GVM:** (a) Gross Vehicle Mass

(Tow vehicle) **GCM:** (c) Gross Combination Mass

2: Are the above items "Actual Masses" or "Ratings": (c) Ratings

3: Are "Tare Mass" & "Ball-loading "actual masses" or "Ratings": (c) actual masses

4: The definition of "Tare Mass" for a Caravan & Camper/Tent-Trailer is:

(c) The actual mass of the caravan with all OEM equipment fitted - as specified on the sales contract - with empty water tanks and empty LPG cylinders, and without any luggage or personal effects. This is measured with the jockey-wheel and tyres on the weigh-bridge.

5: What do each of the elements of a tyre designation mean: **LT-P 225 / 85 R 16 90 Q**

LT: (b) Light Truck

P: (c) Passenger (car)

225: (c) Section Width (mm)

85: (b) Profile Ratio (%)

R: (a) Radial Construction

16: (b) Rim Diameter ("

90: (b) Load Rating

Q: (a) Speed Rating

6: What is the standard size for a ball-coupling: (a) 50 mm

7: What does *ADR* stand for: (c) Australian Design Rule

8: What does *AS* stand for: (a) Australian Standard

9: Does the *Tyre & Rim Association* Manual give:

(c) The correct tyre/rim combinations, and the recommended inflation pressures for all tyre sizes, to suit the load carried by the tyre

10: Are *Ball-couplings* suitable for off-road operation: (b) No

11: *Brakes* are required on caravans: (c) If the GTM Rating is above 750 kg

12: *Break-away* brakes are required: (b) If the GTM Rating is above 2,000 kg

13: *ABS* (on tow-vehicle) stands for: (c) Anti-lock Braking System

- 14: If ABS is fitted to the tow-vehicle, will it also automatically work on the caravan: (a) No
- 15: The *Ball-loading* at any time:  
(c) Should be *around* 10% of the caravan/trailer mass (if not otherwise advised by the manufacturer, in writing)
- 16: If the Ball-loading is too *light*:  
(b) The caravan/trailer will most likely develop a *most dangerous* sway (snaking) situation
- 17: If the Ball-loading is too *heavy*:  
(c) Handling, steering and safety will be dangerously impaired, and the tow-bar may fail
- 18: Heavy items should be stored in the caravan: (c) As close as possible to the axle(s)
- 19: If caravan/trailer tyre pressures are too *low*:  
(b) The vehicle will sway and wallow, and the outer edges of the tread will wear out
- 20: If caravan/trailer tyre pressures are too *high*:  
(a) The vehicle will skip and bounce, and the centre of the tread will wear out
- 21: The caravan/trailer allowable/legal Pay-load (Load-carrying capacity) is:  
(b) ATM Rating – (minus) Tare Mass
- 22: The left-side and right-side brakes should be:  
(a) Regularly checked for wear, and adjusted evenly
- 23: The caravan/trailer lamps:  
(c) Should be checked for correct operation before setting off on a trip
- 24: When towing a caravan/trailer, added or extended mirrors:  
(b) Must be used so as to obtain a clear field-of-view along each side of the vehicle
- 25: When towing a caravan/trailer, the time and distance needed to accelerate from 60 - 80 km/h (compared to just driving the tow-vehicle on its own) are:  
(b) *Appreciably* much longer
- 26: When towing a caravan/trailer, the time and distance needed to slow down from 80 - 60 km/h (compared to just driving the tow-vehicle on its own) are:  
(c) *Appreciably* much longer
- 27: When towing a caravan/trailer around a curve, you should:  
(b) Slow down, because of the additional centrifugal force, and risk of swaying
- 28: *Doubling* your speed - say from 40 - 80 km/h - will:  
(b) Increase the kinetic-energy - and braking distance - by a factor of 4 (four)

29: If you see a B-Double approaching (from the front or rear), you should:

(c) Slow down a little, and firmly hold the steering wheel in case a “sway” starts

30: If the caravan/trailer starts to “sway” or “snake”, you should:

(c) *Don't* panic and *don't* make any sudden/severe manoeuvres, but gently slow down, ensuring that you keep steering in the direction that you need to.

It is strongly recommended that you participate in a driver-training course for Towing.

In addition, it is recommended that you study respected DVD's or books on Towing Safety.

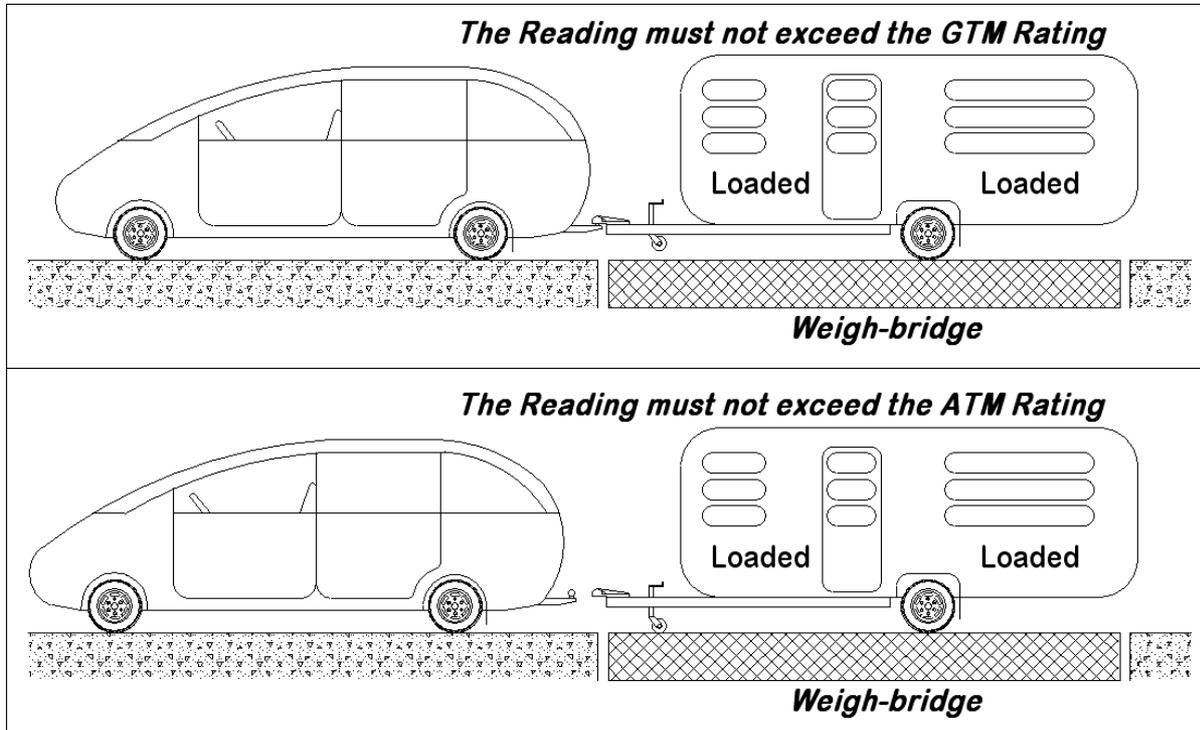
***Remember: You are driving for Recreation... not Wreck-Creation!!!***

## Caravan Ratings & Masses

The GTM & ATM are Ratings... allocated by the Manufacturer

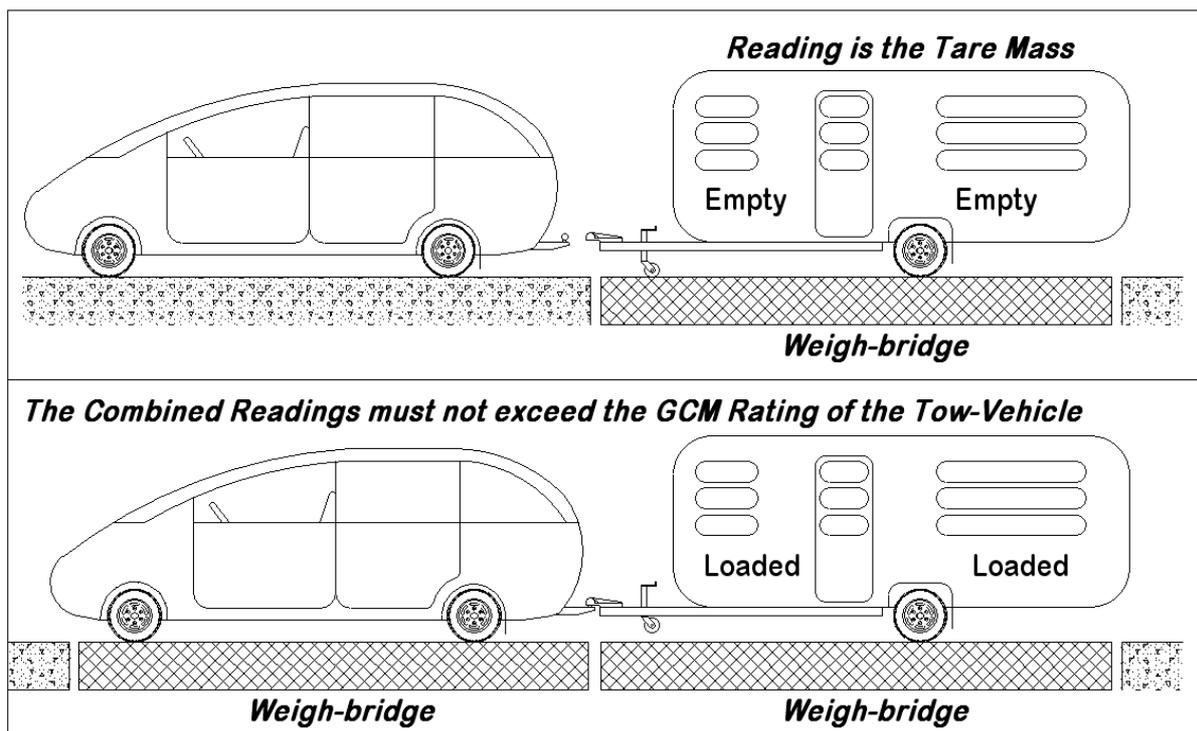
The Tare Mass and Ball-Loading are Actual Masses... that must be measured

The Tare Mass is the *actual measured mass* of the vehicle as it leaves the Supplier. The vehicle is fitted with everything that was stated on the *Purchase Contract*. The vehicle is empty. The gas cylinder(s) and the water tank(s) must be empty.

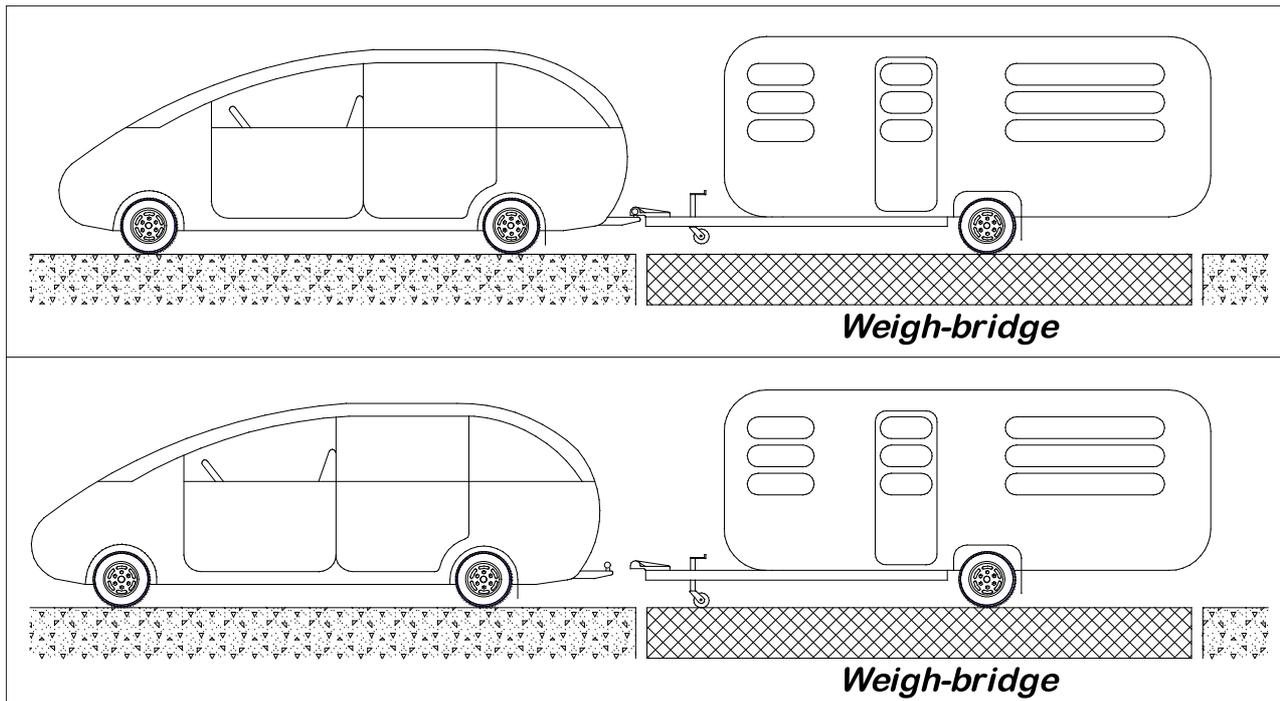


Drawing 1 shows measuring the “**Axle-Loading**” Must not exceed the **GTM** Rating

Drawing 2 shows measuring the “**All-Up Mass**” Must not exceed the **ATM** Rating



**Legal Load-Carrying Capacity = ATM Rating – Tare Mass**



**The Ball-Loading is the *difference* between the two readings**

**ATM: Aggregate Trailer Mass (Rating)**

**GTM: Gross Trailer Mass (Rating)**

**The GTM Rating must *not* exceed the *lowest* of the “Axle-Group” Ratings.**

**The “Axle-Group” comprises the:**

- **Wheels & Tyres**
- **Suspension Structure**
- **Springs**
- **Axles & Wheel-Bearings**

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**Tow-Vehicles:**

- **GVM: Gross Vehicle Mass (Rating)**
- **GCM: Gross Combination Mass (Rating)**
- **RAC: Rear Axle Capacity (Rating)**
- **Maximum Permitted Towing Capacity: (Rating)**
- **Maximum Permitted Coupling Down-load Capacity: (Rating)**

**Tow-Bar: Maximum Permitted Towing & Down-load Limits: (Ratings)**