

What is a Parking Design Standard?

Worksheet

A parking design standard sets the required number of spaces as a ratio to a building's gross floor area ($P = \text{GFA} / r$), plus minimum stall dimensions (typically 2.5 m 5 m) and aisle widths for safe maneuvering.

Questions

1. A building has 4,000 m GFA and the code ratio is 1 space per 50 m. How many spaces are required?
A) 40
B) 80
C) 120
D) 400
2. Which dimension pair is closest to a standard parking stall?
A) 1.5 m 3 m
B) 2.5 m 5 m
C) 4 m 8 m
D) 1 m 2 m
3. Why do 90 (perpendicular) layouts typically fit more cars per linear meter than angled layouts?
A) They need wider stalls
B) They pack stalls tighter along the curb with a shared two-way aisle
C) They require less lighting
D) They ignore code minimums
4. What does the parking ratio 'r' represent in $P = \text{GFA}/r$?
A) Number of floors
B) Area of one parking space required per code
C) Total site area
D) Number of entrances
5. A retail store has 3,000 m of gross floor area. The local code requires 1 space per 50 m. How many spaces are required?
6. An office building has 8,400 m of GFA and the code ratio is 1 space per 70 m. Find the required parking count.
7. A 600 m restaurant falls under a higher-demand ratio of 1 space per 15 m. How many spaces must be provided?
8. Define: What is the standard parking stall size?
9. Define: What is the formula for required parking spaces?
10. Define: How wide should a two-way parking aisle be?

Answer Key

1. B) $80 - P = 4000/50 = 80$ spaces.
2. B) 2.5 m 5 m - Standard stalls are about 2.5 m wide by 5 m long.
3. B) They pack stalls tighter along the curb with a shared two-way aisle - Perpendicular parking maximizes stalls per meter of frontage, at the cost of a wider two-way aisle.
4. B) Area of one parking space required per code - r is the code-mandated floor area that corresponds to one required parking space.
5. $P = GFA / r$ $P = 3000 / 50$ $P = 60$ spaces
6. $P = GFA / r$ $P = 8400 / 70$ $P = 120$ spaces
7. $P = GFA / r$ $P = 600 / 15$ $P = 40$ spaces
8. Typically about 2.5 m 5 m (width length) for a standard passenger vehicle space.
9. $P = GFA / r$, where GFA is gross floor area and r is the code's area-per-space ratio.
10. Usually 6-7 m for 90 parking to allow safe two-way maneuvering.

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