

# Stair rules card: US IRC R311.7 vs UK Approved Document K

Key dimensions for stairs in homes. Local amendments apply; check with your building department or building control.

## Side by side

US values in inches with millimetres; UK values in millimetres.

| ITEM                  | US (IRC)                                       | UK (APPROVED DOCUMENT K)          |
|-----------------------|------------------------------------------------|-----------------------------------|
| Riser height / rise   | max 7-3/4 in (196 mm) · IRC R311.7.5.1         | 150 to 220 mm (private stair)     |
| Tread depth / going   | min 10 in (254 mm) · IRC R311.7.5.2            | 220 to 300 mm (private stair)     |
| Step proportion       | —                                              | 2R + G = 550 to 700 mm            |
| Max steepness         | —                                              | 42 degrees                        |
| Variation in a flight | max 3/8 in (9.5 mm) · IRC R311.7.5.1/.2        | —                                 |
| Nosing projection     | 3/4 to 1-1/4 in (19 to 32 mm) · IRC R311.7.5.3 | open risers: treads overlap 16 mm |
| Headroom              | min 80 in (2,032 mm) · IRC R311.7.2            | min 2,000 mm                      |
| Width                 | min 36 in (914 mm) · IRC R311.7.1              | —                                 |
| Handrail height       | 34 to 38 in (864 to 965 mm) · IRC R311.7.8.1   | 900 to 1,000 mm                   |
| Handrail needed       | 4 or more risers                               | both sides if width ≥ 1,000 mm    |
| Guard height          | min 34 in (864 mm)                             | 900 mm (dwellings)                |
| Open riser gap        | 4 in (102 mm) sphere                           | 100 mm sphere                     |
| Guard openings        | 4-3/8 in (111 mm) sphere                       | —                                 |
| Long flights          | max rise 151 in (3,835 mm) · IRC R311.7.3      | 36 risers, then change direction  |
| Landing depth         | min 36 in (914 mm) · IRC R311.7.6              | —                                 |

— means the cited sources give no matching rule; do not read it as 'no limit'.

## UK rise and going by stair category

Approved Document K Table 1.1.

| CATEGORY             | RISE (MM) | GOING (MM) |
|----------------------|-----------|------------|
| Private stair        | 150–220   | 220–300    |
| Utility stair        | 150–190   | 250–400    |
| General access stair | 150–170   | 250–400    |

2R+G 550-700 mm; private stair max pitch 42 degrees. Private row confirmed by LABC Warranty TM s.9.

- DCA 6: deck stair stringers must be at least 2x12.
- DCA 6: a cut stringer needs at least 5 in of wood below the notches.
- DCA 6: cut stringers at 18 in o.c. max; at least 3 for a 36 in stair.
- Single-source values are marked in our fact base; confirm against your adopted code edition.

Sources (checked 2026-10-23): **American Wood Council**: DCA 6 - Prescriptive Residential Wood Deck Construction Guide (2015 IRC version, (c)2018, incl. Commentary); **City of Boise Building Division**: IRC Code Handout #437 - IRC Section R311.7.5 Stair Treads & Risers (02/2022); **City of Gilroy Building Division**: Residential Stairways, Handrails and Guards handout - California Residential Code R311.7 and R312 (rev. 03/03/2025); **LABC Warranty (MD Insurance Services)**: Technical Manual Version 11 - Section 9: Stairs; **UK Government (MHCLG)**: Approved Document K: Protection from falling, collision and impact (2013 edition, online version).

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