Safer by Design

Where the numbers come from

Statistics and methodology
November 2019

The Royal Society for the Prevention of Accidents

Health and Safety risks in buildings

Table 11 Risk index categories for domestic health and safety hazards

Domestic Health and Safety Hazard	Category	Risk Index
Hygrothermal conditions	A	83
Slips, trips and falls on the level		78
Particles and fibres		78
Radon		78
Environmental tobacco smoke		72
Slips, trips and falls on stairs, ramps and escalators		71
Security and the effects of crime	B	70
Noise		70
House dust mites		69
Burns and scalds		68
Fires in buildings		67
Carbon monoxide		66
Fungal growth		62
Lighting		62
Space and crowding		62
Lead		61
Slips, trips and falls from windows, balconies and roofs	C	60
Oxides of nitrogen		60
Toilet facilities		60
Volatile organic compounds		59
Collision/entrapment involving doors		59
Sources of infection other than toilets		58
Electrical hazards		56
Drowning		56
Collision/entrapment involving windows	D	50
Sulphur dioxide		50
Cockroaches		48
Structural collapse and falling objects		48
Explosions in buildings		48
Land contamination including landfill gas		41
Biocides		26
Collision/entrapment involving lifts and escalators		14
Electromagnetic fields	NBRA	

Review of Health and Safety Risk Drivers (2008)
BD 2518

Key to the risk categories

A	Highest risk category
B	Second risk category
C	Third risk category
D	Fourth risk category
NBRA	No Basis for Risk Assessment

http://webarchive.nationalarchives.gov.uk/20120919132719/www.communities.gov.uk/publications/planningandbuilding/reviewhealthsafety

Table 25: Likelihood values for each hazard at each level of risk

Hazard	Likelihood values			
	Category 1	Actionable	Average	Building Regulations 2010
Excess cold	50	744	2,152	56,341
Falls associated with stairs and steps*	32	66	245	256
Falls on the level	18	49	135	160
Falls between levels*	6	15	1,693	2,132
Fire*	56	464	4,760	5,701
Collision and entrapment*	2	5	39	42
Falls associated with baths etc*	18	53	4,026	4,026
Damp and mould growth	2	10	464	500
Hot surfaces and materials*	6	15	182	230
Lead	5	9	58,400	180,000
Entry by intruders	2	10	40	100
Radon (radiation)	910	1,820	10,000	10,000
Personal hygiene, sanitation and drainage	9	19	7,750	34,040
Food safety	9	19	4,060	20,270
Domestic hygiene, pests and refuse	1	3	5,585	5,585
Crowding and space	155	311	8,000	8,000
Noise	3	9	900	1,000
Carbon monoxide and fuel combustion products	2	3	1,250	1,250
Structural collapse and falling elements	6	13	11,170	14,701
Electrical hazards	29	59	16,869	16,869
Position and operability of amenities (ergonomics)	8	15	12,925	17,679
Uncombusted fuel gas	27	55	83,784	180,000
Lighting	6	11	50,825	50,825
Water supply for domestic purposes	5	9	1,423,649	4,414,406
Excess heat	328	652	900,000	150,000
Explosions	114	229	156,528	156,528

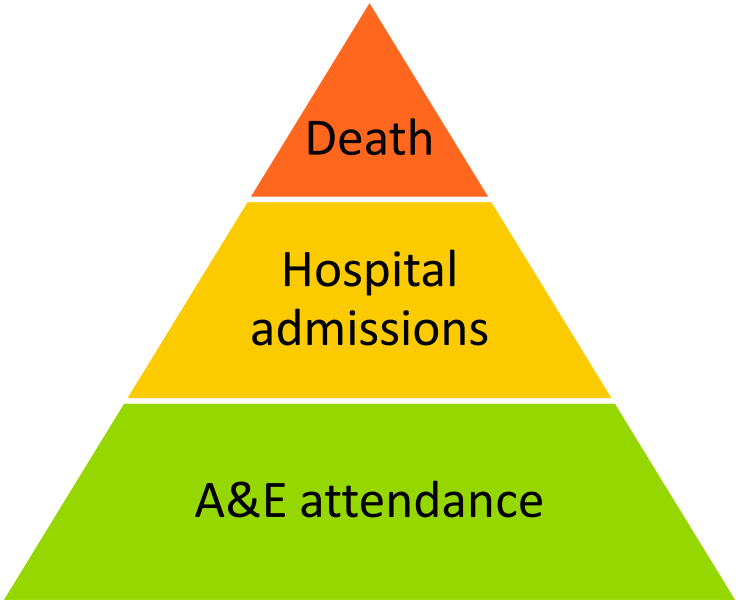
* Different spread of harms for HHSRS Category 1 hazards only.

- **Consider hazards where BR 2010 likelihood:**
  - **Likelihood > 1:5,000**
  - **Accidental injury related**

Table 25, from FB81 The Full cost of poor housing

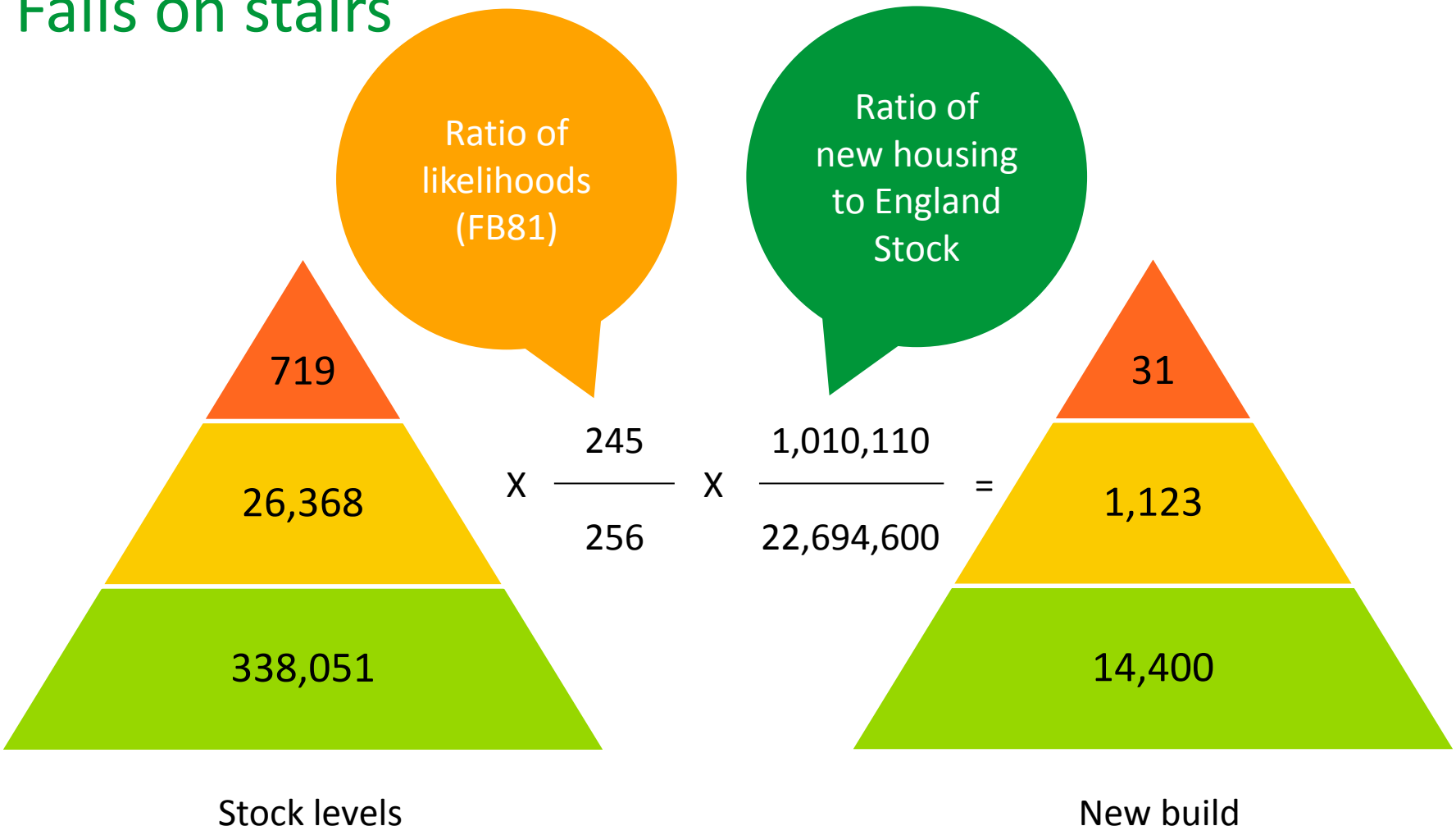
https://www.brebookshop.com/details.jsp?id=327672

How can we measure them (available evidence)

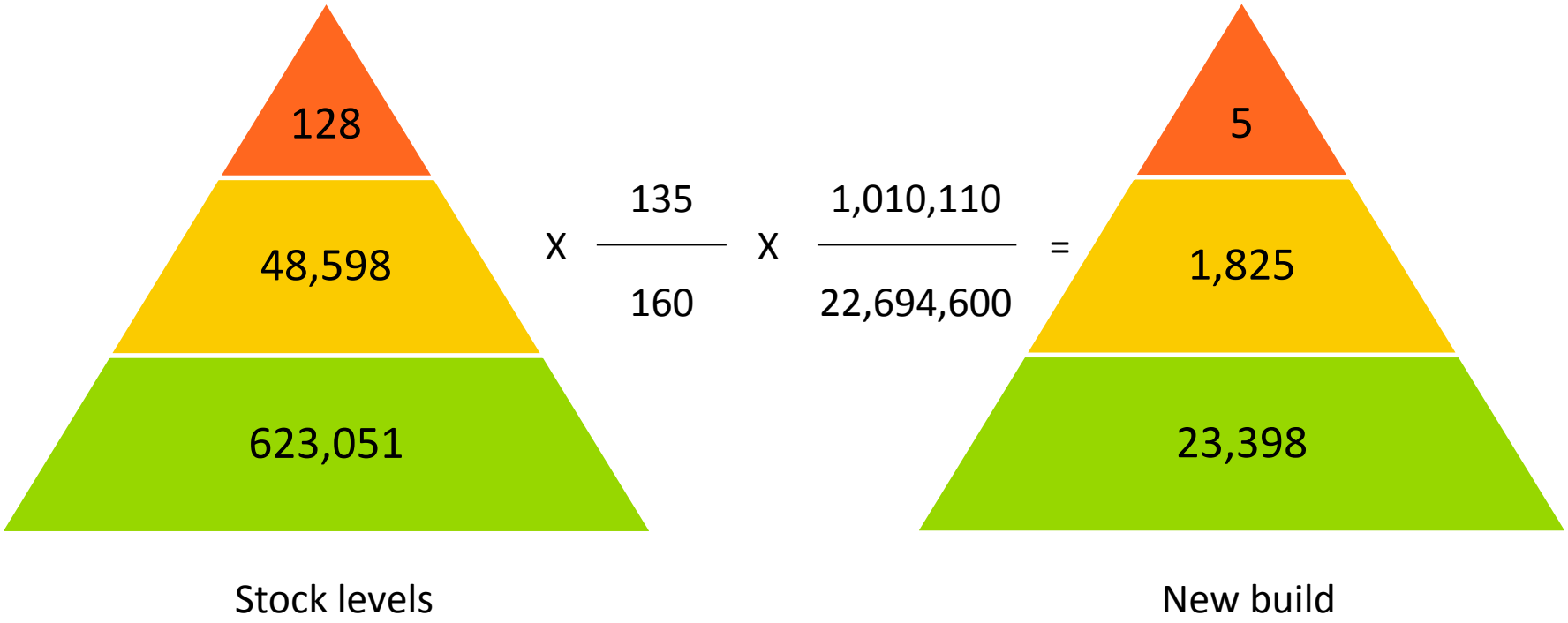


- **Levels of harm**
  - **Deaths per annum (ONS, 2016)**
  - **Hospital admissions (HES, 2016)**
  - **Visits to A& E (HASS approximation)**
- **Average to New build**
  - **Different likelihood**
  - **Changing spread of harms**
  - **Smaller number on homes**
  - **New risks introduced**

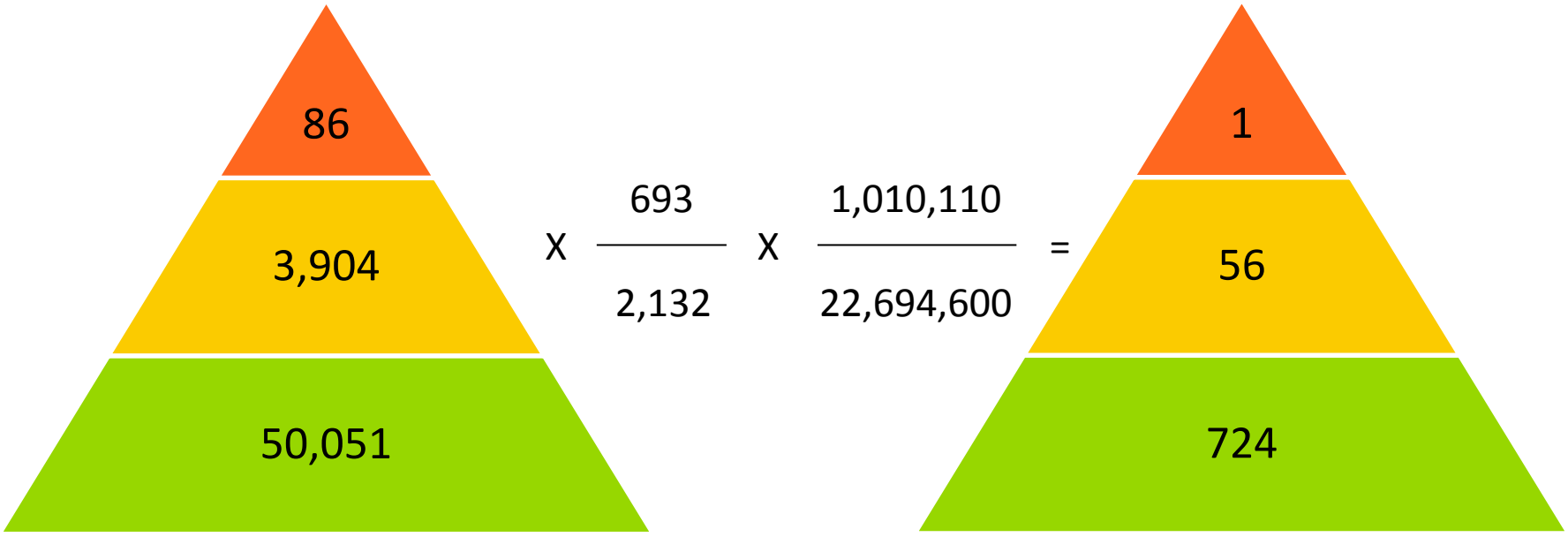
Falls on stairs



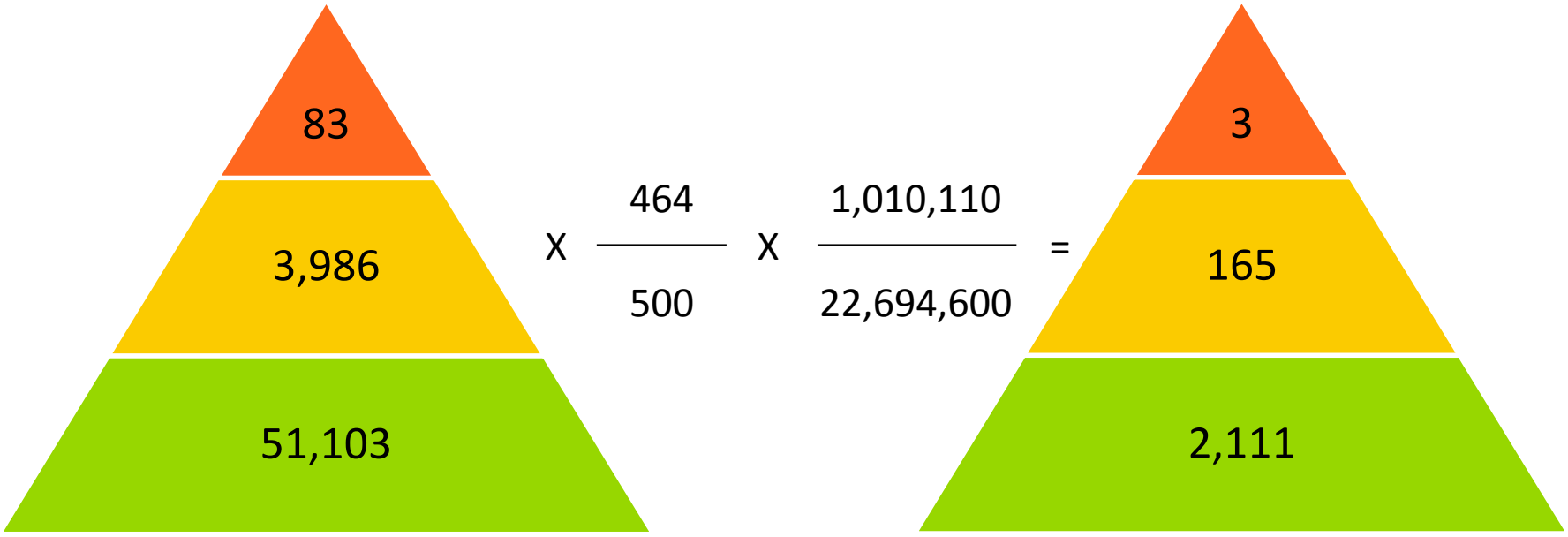
Falls on the level



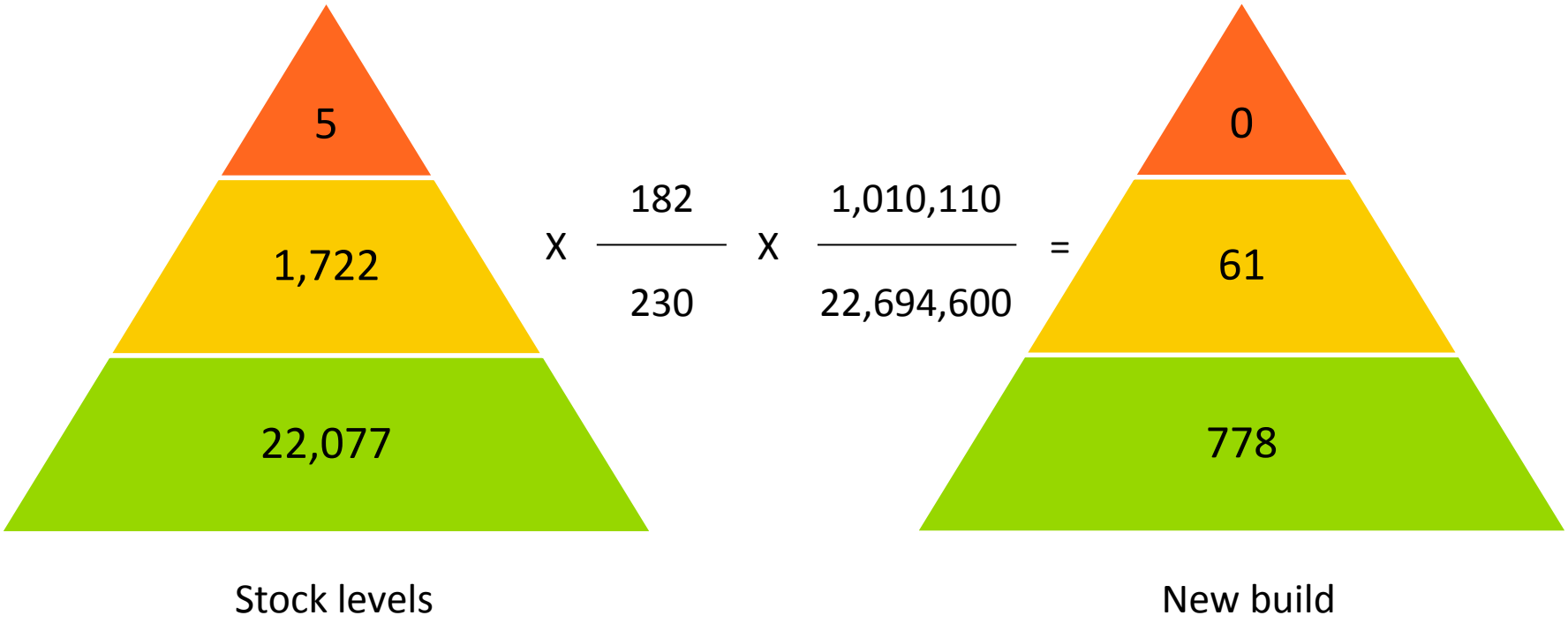
Falls between levels



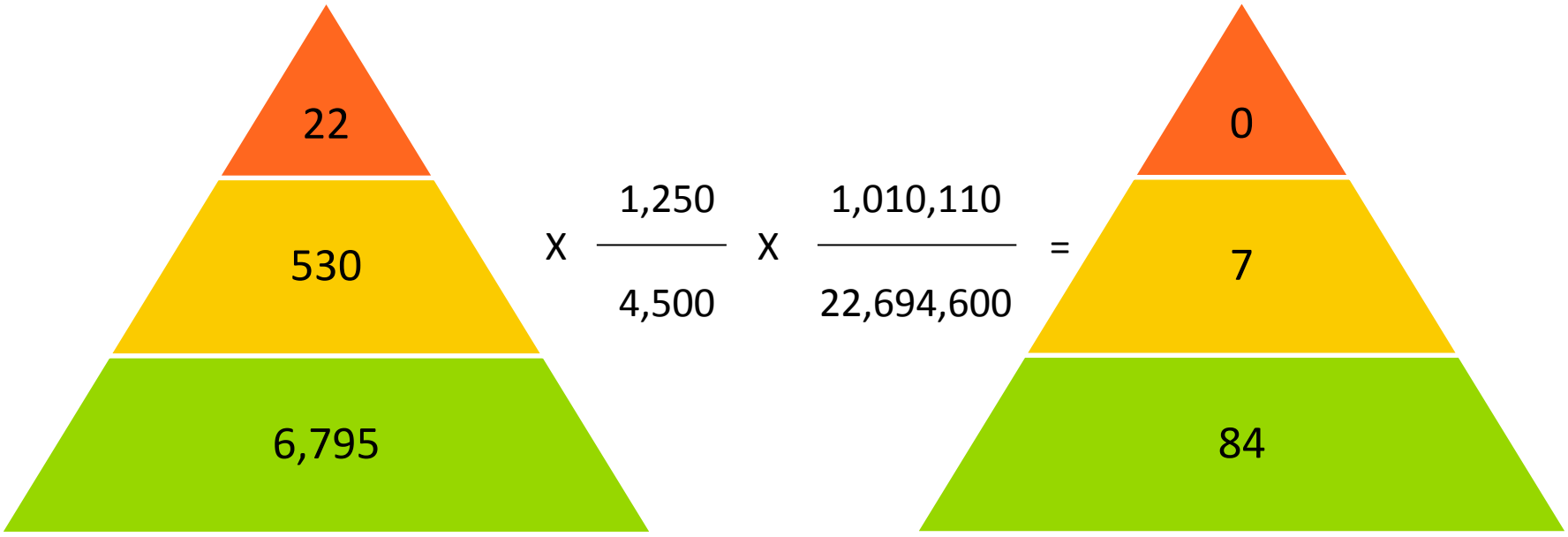
Falls in bathrooms (estimate)



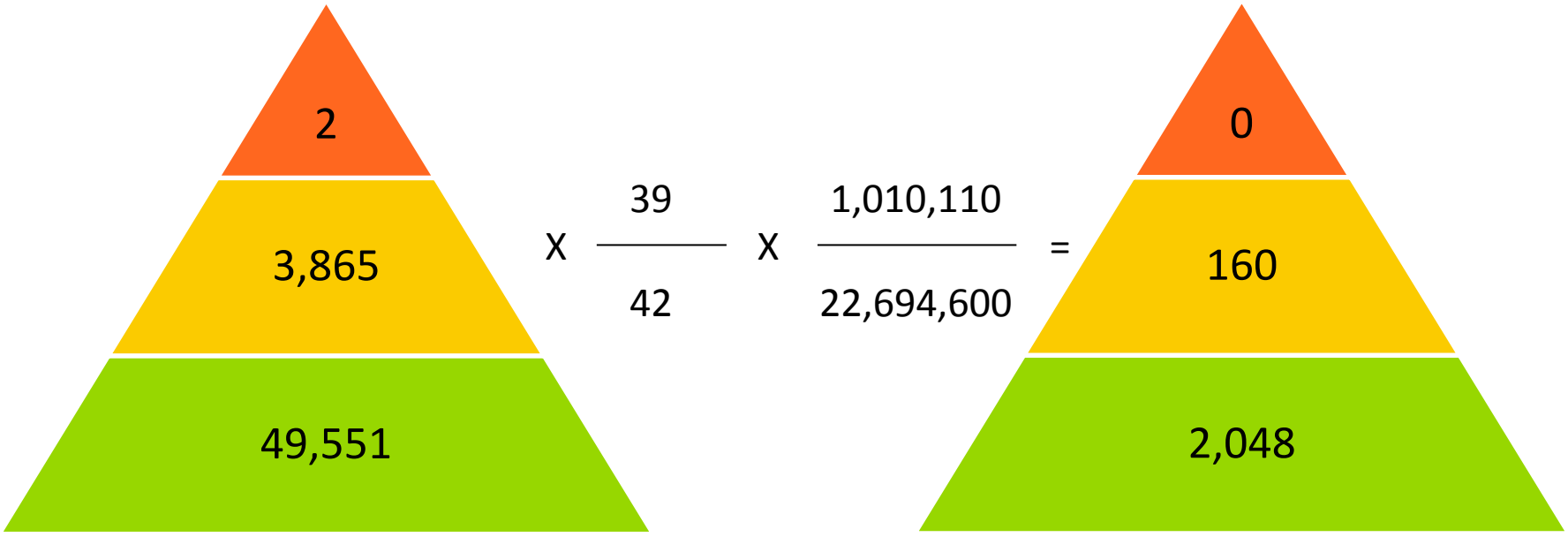
Burns – Hot surfaces



Carbon Monoxide Poisoning



Entrapment in doors



Stock levels

New build