



# Extrication Competence Framework



**NFCC**  
National Fire  
Chiefs Council

The extrication competence framework outlines the knowledge, awareness, performance criteria and training required to obtain and maintain competence in road vehicle casualty extrication.

Each level relates to fire and rescue service roles and should be used as a benchmark for training requirements and road traffic collision (RTC) extrication responses.

Each level also reflects National Operational Guidance and current best practice. Following consultation, the framework has been structured to allow fire and rescue services some flexibility so it can align with different response and training models where necessary.

Competence level	Role	Description
Level 1	Firefighter in development	Safe to operate on the incident ground and provide scene safety, set up equipment and prepare the road vehicle for casualty extrication
Level 2	RTC practitioner (operator/technician/heavy rescue)	Competent technical operator; additional competence required for specialist or heavy rescue practitioners
Level 3	Incident command level 1 and level 2	Operational incident command; additional competence required for tactical commanders
Level 4	Trainer/instructor	RTC trainer; additional competence required for service or regional-level instructors
Level 5	Subject matter expert	This additional level recognises an individual who influences national guidance and good practice; they are active members of -recognised organisations such as The Institution of Fire Engineers (IFE) or United Kingdom rescue Organisation (UKRO)

The below outlines what is necessary to progress to the next level:

- Competence level 1 – Individuals need to have demonstrated competence to progress to competence level 2
- Competence level 2 – Individual qualified operational firefighters need to obtain and maintain competence at this level
- Competence level 3 – Subject to the requirements of competence level 2 and other necessities for the role as detailed in National Operational Guidance and individual service policies
- Competence level 4 – Subject to the requirements of competence level 2 and other necessities for the role as detailed in National Operational Guidance and individual service policies
- Competence level 5 – Individual needs to have demonstrated competence at all levels and participate in research and development that links to the rescue of casualties from RTCs

## Framework guide

No criteria (blank) – There is no requirement for knowledge or demonstration of competence in this area.

Awareness criteria (A): Individuals should be aware that the function or task presents a risk and that controls need to be introduced. If exposed to a function, anyone with an awareness only must be supervised.

Knowledge criteria (K): An individual should demonstrate an understanding of the task or function, including the contributing factors, risks, hazards and control measures. Individuals should also have the knowledge necessary to perform consistently or be effective in their specific role. This criterion applies to individuals in development, in a supporting role or where they no longer undertake the functions or tasks practically (such as incident commanders) but still need the relevant knowledge to make decisions or influence change.

Performance criteria (P): In addition to having the relevant knowledge and understanding, individuals should have demonstrated application of the task in a practical environment. An individual should be able to undertake the task effectively and safely without supervision.

Requirement for the role (Y): Where ‘Y’ is followed by a superscript 1 (Y<sup>1</sup>), it indicates that training is required for a higher level of operation, for example a specialist operator, service-wide instructor or Level 2 incident commander.

A letter followed by a superscript letter, for example K<sup>P</sup>, indicates that a higher or lower level of competence is required at that level for a specific role, such as a service instructor rather than station-based trainer or a specialist practitioner rather than a standard operator.

For example:

Competence level	1	2	3	4	5
The process required to make a crash barrier safe and deal with the impact of other street furniture	A	K <sup>P</sup>	A	K <sup>P</sup>	A
Be able to implement suitable lifting plans		A <sup>P</sup>	P	A <sup>P</sup>	P

In the table above, the following applies:

Level 1 – Firefighters in development are required to be aware of the processes required to make a crash barrier safe, the empty box indicates they do not need to have an awareness of lifting plans.

Level 2 – Practitioners are required to know that crash barriers and street furniture pose a risk, while a specialist rescue operative is required to perform tasks to deal with the situation both safely and effectively. Likewise, a practitioner should have an awareness of lifting plans, while a specialist rescue operative should be able to implement and understand them.

Level 3 – incident commanders should have an awareness of the hazards presented by crash barriers and street furniture and the process to make them safe, and be able to demonstrate implementing a suitable lifting plan.

Level 4 – A station trainer/adviser should have the knowledge to inform others that crash barriers and street furniture pose a risk, while a service-level instructor must have the skills to be able to teach others how to control the risks from crash barriers and the impacts of other street furniture. Likewise, a station trainer or adviser must have the awareness to inform others of the purpose of lifting plans and when they would be used, whereas a

service-level instructor must be able to teach others to produce the plans and carry them out.

Level 5 – A subject matter expert should have an awareness of the hazards presented by crash barriers and street furniture and the process to make them safe, and be able to demonstrate implementing a suitable lifting plan.

To support the extrication framework, the following is also required:

- Incident command training, appropriate to the role
- Manual handling
- First aid and trauma care, appropriate to the role and either within first aid regulations or the clinical governance arrangements for their service
- Leadership, Level 1 (leading yourself)
- Health and safety at work, appropriate to the role
- Awareness of National Operational Guidance and how it is used in their organisation
- Awareness of National Occupational Standards

Training provider/fire and rescue service extrication competence framework

Competence level		1	2	3	4	5	
Road transport (general)	Legal	Understand the fire and rescue service's responsibilities to respond to roadways incidents	A	K <sup>P</sup>	P	P	P
		Understand the legal issues of closing a road		A	P	P	P
		Abide by the legislation that influences lighting on emergency vehicles and how it should be used at a roadway incident		A	K	A	A
	Guidance	Understand the CLEAR principles (England only)		A <sup>K</sup>	P	A	P
		Be able to identify hazards associated with approaching incidents on a roadway	A	P	P	P	P
		Ensure safe and adequate access to a roadway incident		K <sup>P</sup>	P	P	P
		Be aware of the guidance about positioning fire and rescue service vehicles at the scene of a roadway incident		K <sup>P</sup>	P	P	P
		Be aware of the specialist advice for working on roadways		A <sup>K</sup>	K	K	K
		Be aware of the different agencies that may attend a roadway incident	A	K	K	K	K
		Understand the roles and responsibilities of other emergency responders at the scene of an RTC	A	K <sup>P</sup>	P	P	P
		Understand the six phases of extrication	K	P	P	P	P
	Roadway infrastructure	Be aware of the impact a roadway incident can have on the wider transport infrastructure and community		A <sup>K</sup>	P	P	P
		Be able to identify the different types of road networks and their associated risks		A <sup>K</sup>	P	P	P
		Be able to interpret location markers for different incident types		A <sup>K</sup>	P	P	P
		Understand the procedures associated with managed motorways or roadways			P	P	P
		Understand reverse running procedures on motorways		A	P	P	P
		The hazards associated with a road vehicle involved with a crash barrier or street furniture	A	K <sup>P</sup>	P	P	P
		The process required to make a crash barrier safe and deal with the impact of different street furniture	A	K <sup>P</sup>	A	K <sup>P</sup>	A
	Safe General	Be able to identify and wear correct personal protective equipment (PPE) when working on roadways	P	P	P	P	P

	Understand the limitations of PPE in certain circumstances (such as those involving high voltage systems, chemicals and contaminants)	P	P	P	P	P
	Be able to identify hazards at the scene, perform a dynamic risk assessment and apply appropriate control measures	A	K <sup>P</sup>	P	P	P
	Be able to work safely at the scene of a roadways incident	P	P	P	P	P
	Understand scene and casualty safety	K	P	P	P	P
	Establish safety cells for safe working under road vehicles or loads	A	K <sup>P</sup>	K	K	K
	Be able to identify and mitigate risks as they arise during the incident	A	P	P	P	P
	Understand where to access further on-scene and remote information and guidance about road vehicle technology	A	P	K	P	K
	Be able to use the correct terminology related to road vehicles to support consistent and clear communication	K	P	P	P	P
	Be able to use fire and rescue service vehicles appropriately to protect the incident scene on roadways	A	K <sup>P</sup>	P	P	P
	Establish a safe working area using signs, cones and warning lights	K	P	P	P	P
Scene safety	Provide appropriate levels of extinguishing media to deal with actual or potential fires	P	P	P	P	P
	Understand actions to be taken when hazardous materials are involved	A	K	K	K	K
	Recognise when street furniture presents a risk to emergency responders or the public	A	K	K	K	K
	Know how to eliminate or reduce risks from street furniture to an acceptable level	A	K	K	K	K
	Be able to establish and maintain an inner cordon	A	A <sup>K</sup>	P	A	P
Tool safety	Perform appropriate, safe and effective tool operation	A	P	K	P	K
	Be aware of the risks associated with tool operation	A	P	K <sup>A</sup>	P	K
	Understand safe systems of work related to tool operation and the need to monitor activities	A	P	P	P	K
	Understand the need to maintain a clear working area	A	P	P	P	P
	Know how to establish a debris holding area	P	P	K	P	K
	Establish an equipment holding area	P	P	K	P	K

	Know which tools to select to maximise performance, prevent damage and reduce risk to responders and casualties	A	P	K	P	K
	Understand how tool operation can impact the casualty	A	P	K	P	P
	Know how to identify when tools are not effective and why	A	P	K	P	K
	Be able to maintain rescue tools in line with service/manufacturers' requirements	A	P	A	P	A
	Record equipment use and testing	A	P	A	P	A
	Understand the risks from high-pressure oil injuries and the actions to take in the event of a skin penetration injury	P	P	P	P	P
Planning/command	Perform at incident command level 1		A	P	K	K
	Perform at incident command level 2		A	K <sup>P</sup>	A <sup>K</sup>	K
	Establish a formal relationship with the ambulance service		A	P	K	K
	Understand the factors that influence situational awareness at an RTC		K	P	K	K
	Prioritise entrapment release		K	P	K <sup>P</sup>	K
	Identify and communicate appropriate extrication pathways, formulating and implementing plans to facilitate the removal of casualties to a place of safety (immediate, emergency and full)	A	P	P <sup>K</sup>	K	K
Scene management	Identify the local and regional resources available to deploy at roadways incidents		A <sup>K</sup>	K	K	K
	Be able to use visual indicators en route to an incident that can help build a picture of what is involved and communicate this to relevant parties	A	K	P	K	K
	Use a range of sources to gather information available at roadways incidents, taking into consideration the incident size and location		A	P	K	K
	Maintain communication between all parties and provide continual updates	A	P	P	P	K
	Establish safety cordons around identified areas of high risk		A	P	K	K
	Establish a cordon, the size of which is reflective of the location, geographical factors and nature of the roadway incident		A	P	K	K
Casualty care	Confirm and communicate the involvement, number and severity of any casualties	K	P	P	P	P

Know when to appoint a safety officer to monitor stability and other areas of significant concern		A	P	K	K
Understand and be able to identify the different levels of casualty entrapment	K	P	K	P	K
Understand the responsibilities of safety officers in the context of roadways incidents		A	P	K	K
Support the maintenance of inner and outer cordons in the context of a roadway incident	A	A	P	K	K
Contribute to the management of safe working areas at roadways incidents	A	K	P	K	K
Know what information should be provided during handover, specific to roadways incidents		A	P	K	K
Understand the relationship between the types of impact and the consequences on the casualties	P	P	K	P	K
Identify casualties and the severity of their injuries and report to incident commander or responsible officer	P	P	K	P	K
Provide adequate protection during tool and rescue operations	P	P	K	P	K
Identify and communicate severity and type of entrapment	P	P	K	P	K
Inform and reassure casualties about the extrication process	P	P	K	P	K
Assess condition of the casualties and provide necessary care	P	P	K	P	K
Maintain ongoing communication with incident commander and on-scene medical personnel in relation to condition of casualties and progress of extrication	P	P	K	P	K
Protect the casualty from the effects of the extrication process	P	P	K	P	K
Manage hazards associated with the extrication to minimise the risk to casualties and those involved in the extrication	P	P	K	P	K
Use appropriate techniques and equipment to access casualties	P	P	K	P	K
Use appropriate techniques and equipment to move casualties to a place of safety	P	P	K	P	K
Understand principles and methods of primary survey and casualty assessment	P	P	K	P	K
Understand principles of initial casualty care	P	P	K	P	K

	Understand techniques for handling casualties, taking into consideration their known or potential injuries	P	P	K	P	K	
	Understand the importance of establishing and maintaining communication with all persons involved	P	P	K	P	K	
	Be able to support medical professionals to perform a casualty-focused rescue and extricate the casualty without worsening the situation	P	P	K	P	K	
Road vehicle technology	Fuel systems	Be aware of the benefits of alternative fuels to the environment	A	A	A	A	A
		Understand the different types of fuels used to power road vehicles	A	P	K	P	K
		Identify a road vehicle's fuel source	A	P	K	P	K
		Have a basic understanding of how traditional and alternative fuel systems operate	A	A	A	K	K
		Understand the risks from different fuels and energy systems	A	A	A	K	K
		Be able to reduce the risks from fuel and energy systems	A	P	K	K	P
		Be aware of emerging technologies in relation to fuel systems	A	A	A	A	K
	Electrical systems	Be aware of the different types of batteries used in road vehicles	A	A	A	A	K
		Understand the functions of electrical systems in road vehicles	A	A	A	K	K
		Be aware of unexpected road vehicle movement caused by the unintentional activation of any motor and the controls to prevent this	K	P	K	P	P
		Be able to identify road vehicles with high voltage systems	K	P	K	P	P
		Know how to shut down or isolate road vehicle electrical systems and components safely	A	P	K	P	P
		Understand the risks of isolating electrical systems using procedures not recommended by road vehicle manufacturers	A	K	K	K	K
		Understand both the implications and benefits of isolating a road vehicle's electrical system	A	P	P	P	P
		Know the actions to take when electrical systems cannot be isolated	A	P	K	P	P
Know that residual charge may remain after isolation		A	P	K	P	P	



Road vehicle structure	Understand the different types of road vehicle structures and be able to identify and name the key components	A	P	K	P	P
	Be able to identify body-on, monocoque and space-frame chassis	A	P	K	P	P
	Be aware of the different types of materials used in road vehicle construction and how to identify them	A	P	K	P	P
	Understand the risks and hazards of damaged road vehicle construction materials	A	P	K	P	P
	Identify road vehicle structural elements that contain high-strength metal and consider how these will impact extrication options	A	P	K	P	P
Construction materials	Understand how the materials used in road vehicle construction react in a collision	A	P	K	P	P
	Understand how deformation of a road vehicle construction material creates stored energy	A	P	K	P	P
	Understand the term 'relevant strength' and its impact on rescue operation tools	A	P	K	P	P
	Understand how to mitigate the effects of damaged materials, including airborne particulates	A	K	P	P	P
Road vehicle safety systems	Be aware of the types and uses of road vehicle safety systems	K	P	K	P	P
	Be able to identify the presence of undeployed airbags, safety restraint systems (SRS) and safety management systems in road vehicles	K	P	K	P	P
	Understand how different safety systems in road vehicles deploy and their associated hazards	K	P	K	P	P
	Apply safe working distances and other control measures to limit risks posed by safety systems in road vehicles	P	P	P	P	P
	Understand the hazards of working close to safety systems in road vehicles	P	P	P	P	P
	Understand how to safely manage airbags and SRS in road vehicles	A	P	K	P	K
	Be aware of the implications of isolating safety systems in road vehicles	A	P	K	P	K
	Recognise the importance of considering risk versus benefit and not delaying a rescue to implement unnecessary controls	A	A	P	K	K
	Be aware of the impact that rescue tool operation has on active safety systems in road vehicles	A	P	K	P	K

Stabilisation	Road vehicle stabilisation factors	Know what to consider when moving or stabilising road vehicles or other objects involved in the incident	A	P	K	K	K
		Be able to identify risks from unwanted road vehicle movement	A	P	P	P	P
		Be able to manage factors that influence road vehicle movement	K	P	K	P	K
		Understand how topography may affect the stability of an object involved in a collision	K	P	K	P	K
		Identify actions to secure the road vehicle in position and prevent uncontrolled movement	K	P	K	P	K
		Be able to assess weight distribution of the road vehicle		A <sup>P</sup>	K	K <sup>P</sup>	K
		Consider how damage to a road vehicle can impact stability	A	P	P	P	P
		Mitigate uncontrolled release of stored energy and the impact on road vehicle stabilisation	A	P	K	P	P
		Be able to identify suitable anchor points for stabilisation equipment	K	P	K	P	P
		Be aware of how rescue operations may impact road vehicle stability	K	P	K	P	P
		Road vehicle stability application	Be able to identify when other actions should be prioritised over road vehicle stabilisation	K	P	K	P
	Know how to apply the different levels of stabilisation		K	P	P	P	P
	Be able to implement suitable lifting plans			A <sup>P</sup>	P	A <sup>P</sup>	P
	Be able to select and use the appropriate equipment safely to secure and stabilise a range of road vehicles and their loads effectively		A	P	K	P	K
	Apply methods to establish appropriate levels of road vehicle stabilisation logically		A	P	K	P	K
	Understand how operational activities impact stability		A	P	K	P	K
	Be able to check and adjust equipment to maintain the stability of the road vehicle and its load		P	P	K	P	K
	Be able to remove stability safely and logically		P	P	K	P	K
	Space creation	Tool operation	Ensure appropriate use and management of rescue equipment	A	P	K	P
Understand the limitations and benefits of all available tools			A	P	K	P	K
Know how to manage and manoeuvre heavy road vehicle components				A <sup>P</sup>	K	K <sup>P</sup>	K

	Understand the factors to consider when working at height		A <sup>P</sup>	K	K <sup>P</sup>	K
	Know how to ensure progression is maintained		P	K	P	K
	Be able to work with others effectively, including establishing and maintaining effective communication	A	P	K	P	K
	Be able to select the appropriate tools to manage construction materials	A	P	K	P	K
General	Understand the relationship between space creation and casualty extrication	A	P	K	P	K
	Be aware of the factors to consider before adopting or attempting space creation		P	K	P	K
	Be able to implement a range of space creation options with a variety of techniques and tools	A	P	K	P	K
	Understand how road vehicle design and structure will influence space creation techniques	A	P	K	P	K
	Select the correct space creation technique for the road vehicle structure and type, including techniques to avoid areas incorporating high-strength metals	A	P	K	P	K
	Understand how the manipulation of construction material may lead to a release of stored energy	A	P	K	P	K
	Understand the need to reveal hazards before using tools and the methods that can be applied to expose potential risks	P	P	K	P	K
	Be able to adopt a range of techniques to open shut lines	P	P	K	P	K
	Identify and communicate barriers to space creation	A	P	K	P	K
	Understand and implement, when appropriate, methods of relocating, repositioning or lifting road vehicles or objects to aid extrication plan progression	A	P	K	P	K
	Access and egress	Identify options for immediate access	A	P	K	P
Identify methods of access to road vehicles		A	P	K	P	K
Establish rapid and controlled extrication pathways		P	P	K	P	K
Communicate barriers to the extrication pathway		P	P	K	P	K
Consider alternative or additional extrication pathways		A	P	K	P	K
Create and maintain appropriate levels of access and egress		P	P	K	P	K
Make rapid entry to the road vehicle, when required		P	P	K	P	K

Heavy road vehicle rescue		Create internal space to support medical activities and casualty extrication	P	P	K	P	K
		Create internal space to support the final extrication pathway and provide additional room for fire service operations	P	P	K	P	K
		Create external space to support casualty extrication	P	P	K	P	K
	Glass management	Identify glass types	P	P	K	P	K
		Understand the principles of managing glass	P	P	K	P	K
		Select the appropriate glass management techniques and tools	P	P	K	P	K
		Provide suitable protection during glass management activities	P	P	K	P	K
		Provide ongoing controls for glass particles and fragments	P	P	K	P	K
	Road vehicle type	Understand the terms 'heavy vehicle', 'large goods vehicle' and 'public service vehicles'	A	K <sup>P</sup>	K	K <sup>P</sup>	K
		Be aware of the different types of road goods vehicles	A	K <sup>P</sup>	K	K <sup>P</sup>	K
		Be aware of the different types of public service vehicles (PSV)	A	K <sup>P</sup>	K	K <sup>P</sup>	K
		Know how to identify road vehicle weight by axles		A <sup>P</sup>	K	K <sup>P</sup>	K
		Know what information is available from road vehicles and their drivers to support operational activities		A <sup>P</sup>	K	A <sup>P</sup>	K
	Compressed air systems	Have a basic understanding of compressed air systems components and how they operate		K <sup>P</sup>	K	K <sup>P</sup>	K
		Understand the hazards created by compressed air systems		K <sup>P</sup>	K	K <sup>P</sup>	K
Understand how compressed air systems can be used to assist at an incident and be able to use them to good effect			K <sup>P</sup>	K	K <sup>P</sup>	K	
Understand how compressed air systems impact stabilisation and road vehicle movement			K <sup>P</sup>	K	K <sup>P</sup>	K	
Be able to isolate, override or drain compressed air systems			K <sup>P</sup>	K	K <sup>P</sup>	K	
PSV/heavy road vehicle	Recognise when additional support or specialist guidance is required to stabilise a road vehicle or its load adequately		A <sup>P</sup>	A	K <sup>P</sup>	K	
	Assess weight distribution of the road vehicle, cargo and insecure loads		A <sup>P</sup>	A	K <sup>P</sup>	K	

	Identify and control the impact heavy components may have on safety during the extrication process		A <sup>P</sup>	A	A <sup>P</sup>	K
	Be aware of the different designs, materials and structures used for PSVs and heavy goods vehicles (HGV)		A <sup>P</sup>	A	A <sup>P</sup>	K
	Know how to control the release of heavy objects during the space creation phase		A <sup>P</sup>	K	A <sup>P</sup>	K
	Identify, consider and control different fuel types		K <sup>P</sup>	K	K <sup>P</sup>	K
	Be aware of the additional hazards and risks when manoeuvring heavy objects at height, including rescue tools or road vehicle components		A <sup>P</sup>	K	A <sup>P</sup>	K
	Identify working-at-height issues and introduce suitable controls, including the use of platforms	A	A <sup>P</sup>	A	A <sup>P</sup>	K
	Identify and select HGV-specific tooling	A	A <sup>P</sup>	A		K
	Consider the use of external agencies to support extrication		A <sup>P</sup>	K	A <sup>P</sup>	K
Specialist vehicles	Be aware that a specialist road vehicle may be constructed using alternative techniques		A <sup>P</sup>	K	A <sup>P</sup>	K
	Be aware that unconventional or specialist road vehicles use alternative means of access		A <sup>P</sup>	K	A <sup>P</sup>	K
	Understand the difficulties associated with gaining access to unconventional and specialist road vehicles		A <sup>P</sup>	K	A <sup>P</sup>	K
	Be aware of how to find specialist information and resources about accessing unconventional or specialist road vehicles		A <sup>P</sup>	K	A <sup>P</sup>	K
	Identify the limitations that standard tools and equipment may have on equipment for unconventional and specialist road vehicles		A <sup>P</sup>	K	A <sup>P</sup>	K
Scene preservation	Be aware of the different types of investigation that may be required at a roadway incident			K	A	K
	Apply the principles of scene preservation	A	K	P	K <sup>P</sup>	K
	Know the types of evidence that may be present at transport incidents	A	K	P	K <sup>P</sup>	K
	Know how to protect the scene for investigation purposes	A	K	P	K <sup>P</sup>	K
	Know how to control the scene to preserve evidence while maintaining operational activity	A	K	P	K <sup>P</sup>	K
	Know how operational activity may affect an investigation and the measures that can be put in place to help evidence preservation	A	K	P	K <sup>P</sup>	K

Training and revalidation	Complete Level 1 command initial training and Continuous Professional Development (CPD)			Y		
	Complete Level 2 command initial training and CPD			Y <sup>1</sup>		
	Undertake and maintain an appropriate level of medical/trauma training in line with national guidance	Y	Y	Y	Y	
	Complete initial operators' course	Y	Y	Y	Y	Y
	Complete an in-house training instructor course				Y	
	Obtain a recognised training instructor qualification				Y <sup>1</sup>	Y
	Complete a heavy rescue operators' course		Y <sup>1</sup>		Y <sup>1</sup>	
	Undertake 16 hours CPD per annum		Y	Y		
	Undertake 32 hours CPD per annum		Y <sup>1</sup>		Y	
	Undertake 48 hours CPD per annum				Y <sup>1</sup>	Y
	Revalidate qualification every three years				Y	
	Participate in a practical development session at least once every six months	Y	Y			
	Participate in at least one RTC exercise per annum		Y	Y	Y	
	Undertake heavy rescue revalidation training every two year (rolling programme between HGV and PSV)		Y <sup>1</sup>		Y <sup>1</sup>	
Standards and development	Support research and development to improve firefighter safety at a national level					Y
	Support developments in firefighter safety at a service level				Y <sup>1</sup>	Y
	Attend regional and national extrication events/seminars				Y <sup>1</sup>	Y
	Collaborate with road vehicle manufacturers to identify emerging technologies that influence rescue operations					Y
	Collaborate with tool manufacturers to support research and development					Y
	Support the development of national standards and guidance					Y
	Engage with nationally recognised sector bodies and organisations to support continuous improvement					Y