



INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

TECHNOLOGIE A MATERIÁLY ZEDNÍK

1

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Název a adresa školy:

Střední odborné učiliště stavební Pardubice s. r. o., Černá za Bory 110, 533 01 Pardubice

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Název projektu: Inovace odborné výuky odborných oborů

Číslo projektu: CZ.1.07/1.1.28/02.0033

NĚMECKÁ VERZE

3.1 Rozdělení stavebnictví

str.12

3.1 Verteilung des Bauwesens

A. Hochbau

- Öffentliche Gebäude - Schulen, Krankenhäuser
- Innenausstattung - Supermärkte, Kinos
- Wohngebäude - RD (Häuser), Kabinen, Fertighäuser

B. Industriebau

- Hochbauten - Produktionshallen
- Türme und Masten Kläranlage (Abwasserreinigungsanlage)
- Wärmetechnische Objekte

C. Bautechnik

- Brücken, Straßen, Autobahnen, Eisenbahnen
- U-Bahn-Linien - Wasserversorgung, Kanalisation
- Freileitungen - Energieverteilung

D. Wasser-Bau

- Dams, Wehre, Dämme, Rückgewinnung

E. Militär Bau

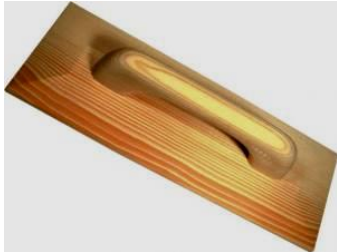
Flughäfen, Lagerhallen

4.1 Zednická hladítka

str. 17

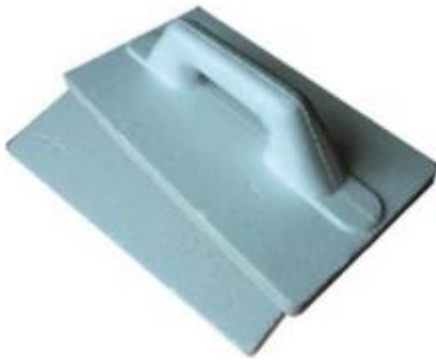
4.1 Kellen

1. Holz - Zentralvorstand - auf Putz, Böden



Schwimmer Holz - Maße: 50 x 14 cm, 72, - CZK

2. Polystyrol - für Putz und Böden



Abmessungen: 70 x 14 cm

3. Polyurethan - für Putz und Böden



Abmessungen: 50 x 28 cm

4. Kunststoff - über die Anwendung von Pflastern, Klebstoffe und Stuck



Abmessungen: 24 x 12 cm, Dicke 4 mm, Kunststoffgriff

5. Stahl

a) auf Betonböden, Abmessungen: 50 x 14cm



b) wies auf Betonböden, Größe 55 x 14 cm



6. Edelstahl sechsten - der Stuck, Schutzkleber und Estrich,



Größe: 50 x 13 cm; Zahn 8 mm

7. Filz - weiß und dunkel, auf den letzten Fertigstuckgips



Kunststoffgriff Maße: 25 x 13 cm

8. Schaumgummi - der Abschluss von Stuck (auffrischen),
Reinigung von Fliesen nach dem Verfugen, Abmessungen:
28 x 14 cm



9. Gummi - schwarz - für die Strukturierung von Gips SP, den Pairing-Fliesen



Maße: 28 x 14cm Holz handbemalt

10. Schwamm - fein oder grob - die Vernichtung der Stuck und Gips



Maße: 28 x 14cm Kunststoffgriff

11. Schleifen

a) PVC - im Vergleich zu Polystyrolplatten zur Wärmedämmung



Abmessungen: 50 x 24 cm Holzgriff

b) für die Schleifgitter 280 x 93 mm

c) Schleifen Gips Zemente



Kelle Maße: 22 x 8 cm Kunststoffgriff

12. Schaber - Bausteine aus Ytong kompensieren





Abmessungen: 45 x 9 cm

ANGLICKÁ VERZE

3 KONSTRUKČNÍ SYSTÉMY A KONSTRUKČNÍ ČÁSTI BUDOV str. 12

3 CONSTRUCTION SYSTEMS AND CONSTRUCTION PARTS OF BUILDINGS

3.1 Division of building industry

A. **Civil building construction**

- Public buildings - schools, hospitals
- Hall objects - supermarkets, cinemas
- Residential buildings - RD (family houses), cabins, blocks of flats

B. **Industrial construction**

- Terrestrial objects - production halls
- Towers and masts WWTP (wastewater treatment plant)
- Heatproof objects

C. **Structural engineering**

- Bridges, roads, highways, railways,
- Underground lines - water supply, sewerage
- Over ground lines - power distribution

D. **Water management building industry**

- Dams, weirs, concrete dams, amelioration

E. **Military buildings**

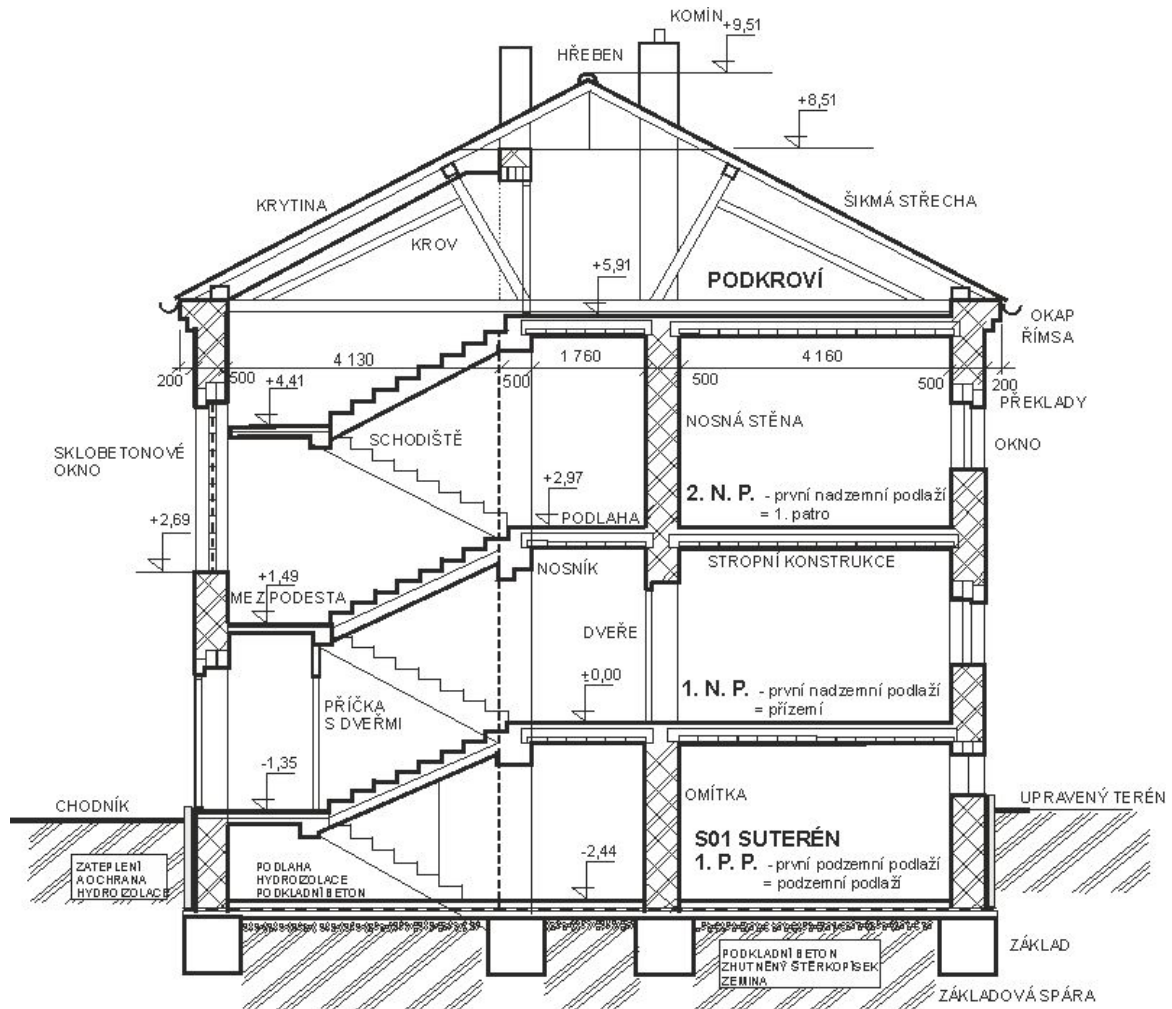
- Airports, warehouses

3.2 Building part

= Clearly defined part of a construction

- Earthworks
- Foundations
- Walls and columns, holes
- Ceilings
- Stairs
- Roofs
- Partitions

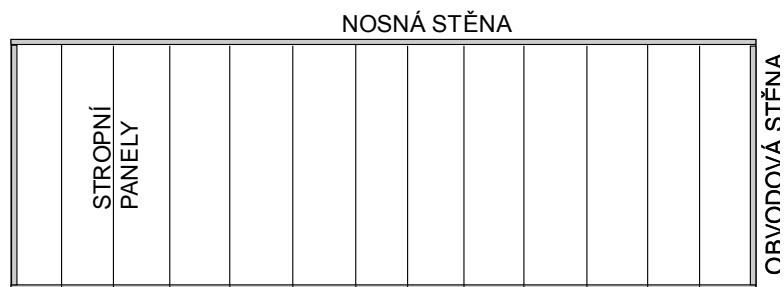
- Surfaces
- Medical technology, heating, electrical, air conditioning
- Built-in furniture equipment, machinery - lifts
- Prefabricated structures (skeleton) and complete assemblies (housing core)



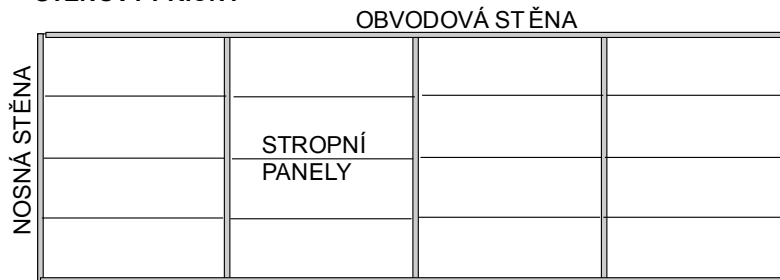
3.3 Structural systems

1. **Wall** - according to the position of vertical constructions - longitudinal, lateral, bi-directional

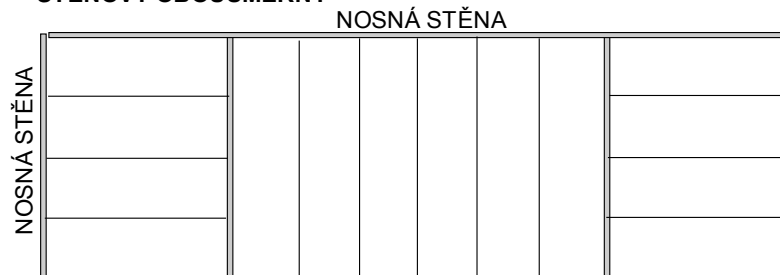
STĚNOVÝ PODÉLNÝ



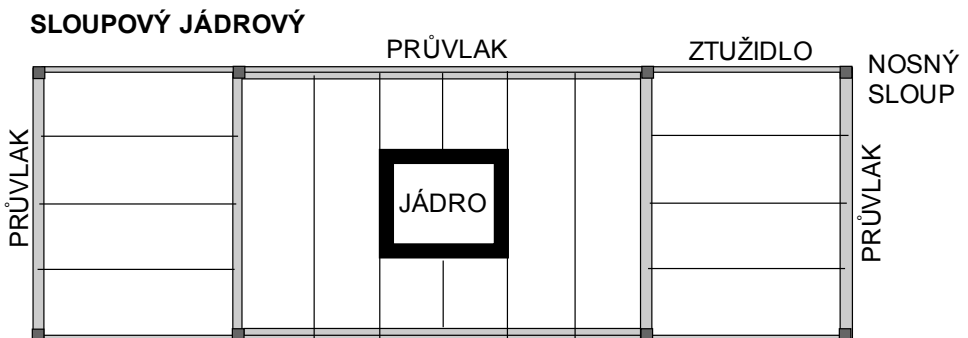
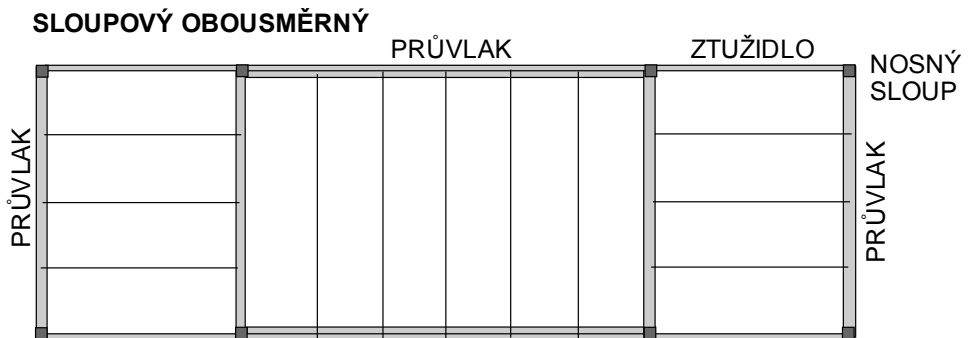
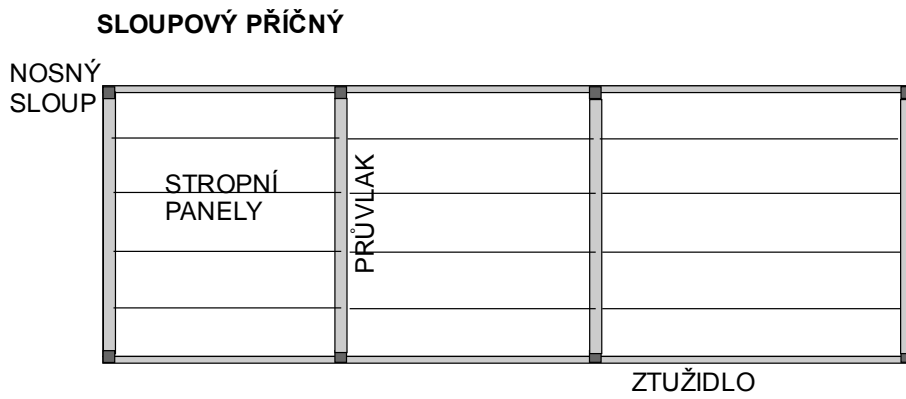
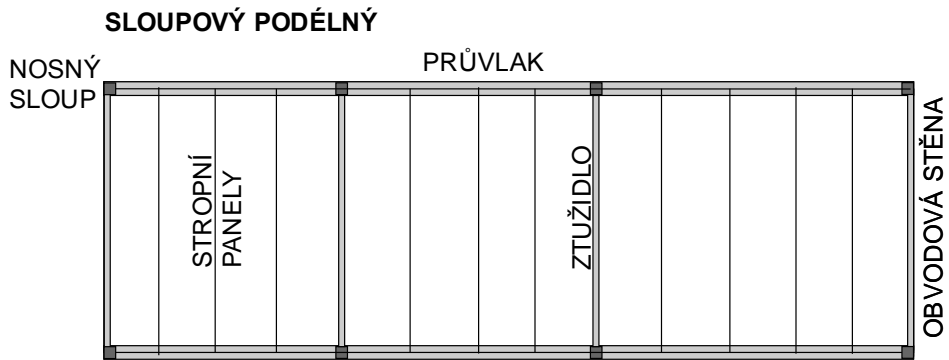
STĚNOVÝ PŘÍČNÝ



STĚNOVÝ OBOUSMĚRNÝ

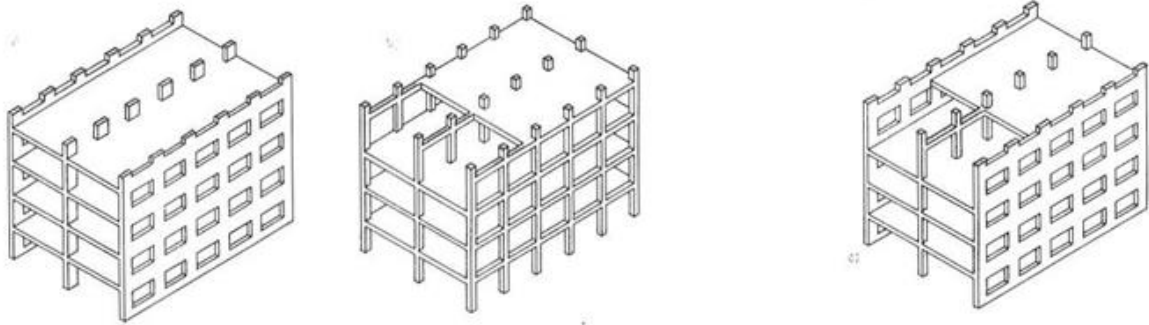


2. Column

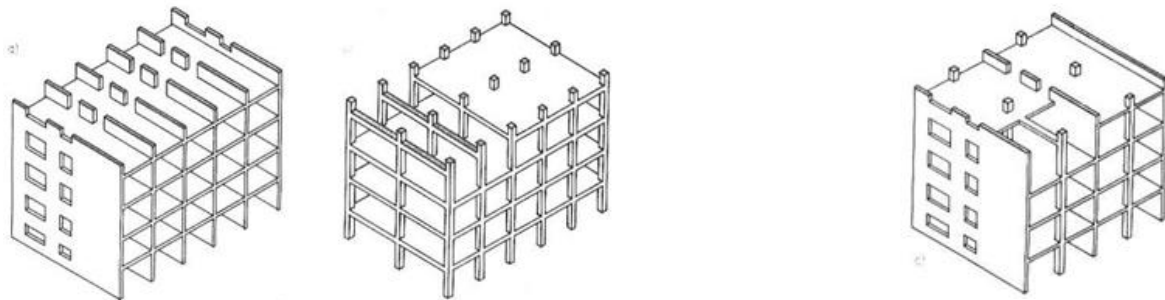


3. **Combined** – walls and columns

a) **Longitudinal**



b) **Transversal**



3.4 Main kinds of work

HSV - Main building construction

PSV - Attached building industry

SPD - Special finishing work - plumber, glazier

TZB - Building services - water, gas, sewer

Further work:

- Preparations - manufacture of concrete, precast
- Auxiliary - manufacture of formwork, repair tools, scaffolding
- Transportation - construction site and installation location

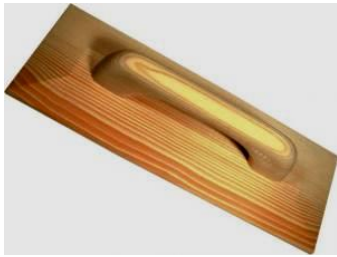
QUESTIONS FOR REVISION

1. Draw and explain the differences between the structural systems.
2. What kind of works do you know?

4 TOOLS AND WORK AIDS FOR BRICKWORK

4.1 Hand floats

1. Wooden – (fratáč) the central board - for plastering, floors



Wooden hand float – dimensions: 50 x 14 cm, 72,- Kč/ks

2. Polystyrene – for plastering and floors



Dimensions: 70 x 14 cm

3. Polyurethane – for plastering and floors



Dimensions: 50 x 28 cm

4. Plastic – (natahovák) for application of plaster, adhesives and stuccoes



Dimensions: 24 x 12cm, thickness 4 mm, a plastic pointer

5. Steel

a) (gleťák) to kletování of concrete floors, dimensions: 50 x 14cm



b) pointed to kletování of concrete floors, dimensions: 55 x 14cm



6. Stainless – for stuccoes, adhesives and insulating screeds



Dimensions: 50 x 13cm; subth 8 mm

7. Felt - white and dark, to the final finishing of stucco plastering



Plastic pointer dimensions: 25 x 13cm

8. Plastic foam - for finalization of stuccoes (brushing up), washing tiles after grouting, dimensions: 28 x 14 cm



9. Rubber - black - for structuring of plasters SP, for jointing tiles and floor tiles



Dimensions: 28 x 14cm, a wooden lacquered pointer

10. Sponge – soft or rough - for smoothing of stucco and gypsum plasters



Plastic hand

11. Abrasive

- a) PVC - for straightening of polystyrene boards during weatherization



Dimensions: 50 x 24cm, a wooden handle

- b) For a sanding grid 280 x 93mm
- c) For grinding of gypsum putties



Dimensions of a hand float: 22 x 8cm, a plastic handle

12. Scraper - to straightening of blocks from YTONG



Dimensions: 45 x 9cm



4.2 Trowels

Plastering trowel – black steel 16 x 13 cm
12 cm



stainless trowel - dimensions: 18 x



4.3 Ladles

Steel ladle with a handle (fanka), dimension 16 cm cm



Ladle with a socket, dimension 21,5 cm



4.4 Spatulas

Stainless spatulas



Spatula with a stiffener, width 25 cm



4.5 Hammers

With a wooden handle (teslice)



Mallet

bricklayer's



pick hammer



with a plastic handle



Rubber mallet



ratchet

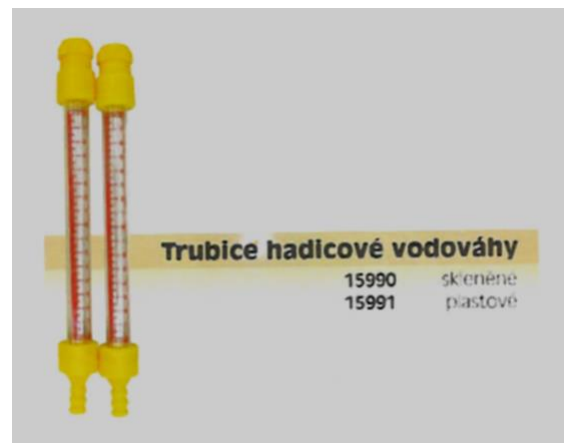


4.6 Measuring tools

Plumb bob with twine, weight 500gr.



Hose spirit level



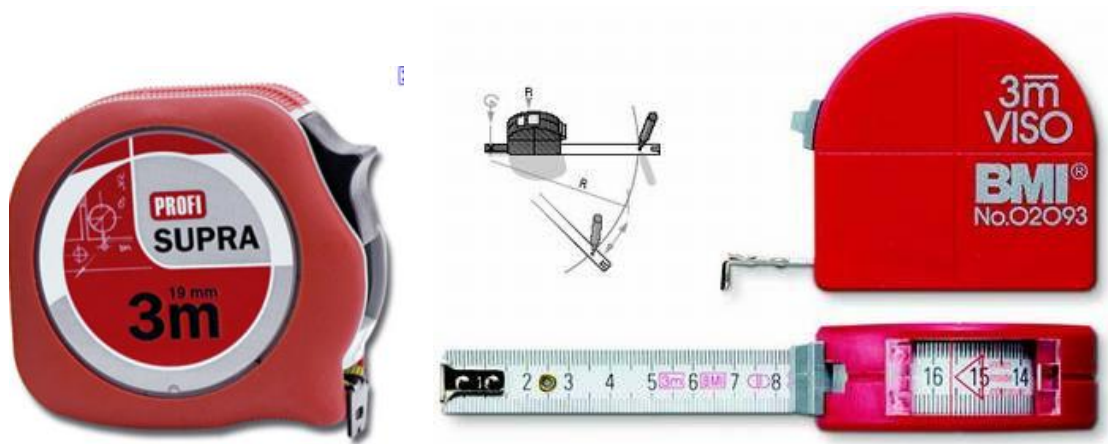
Zigzag rule 2 m



Steel tape, length 20 m



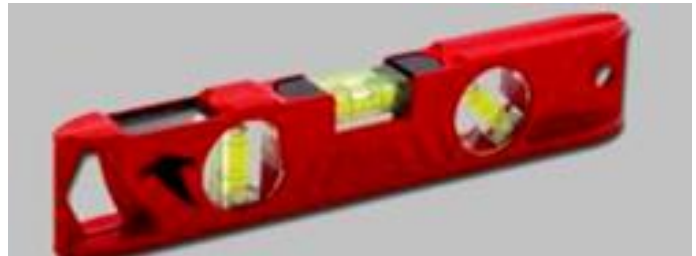
Steel tape



Steel angle 90°, with a ruler 400 x 155 mm



spirit level



Levelling gadget



Theodolite



4.7 Saws

For cutting of **bricks** made of POROTHERM, length 60 cm; 33 teeth



For cutting of **bricks made of Ytong**, length 60 cm; 17 teeth



4.8 Cutter gadgets for tiles



Bricklayers staple



Mortar mixer



QUESTIONS FOR REVISION

1. Name types of bricklayer's tools and explain what they are used for.