

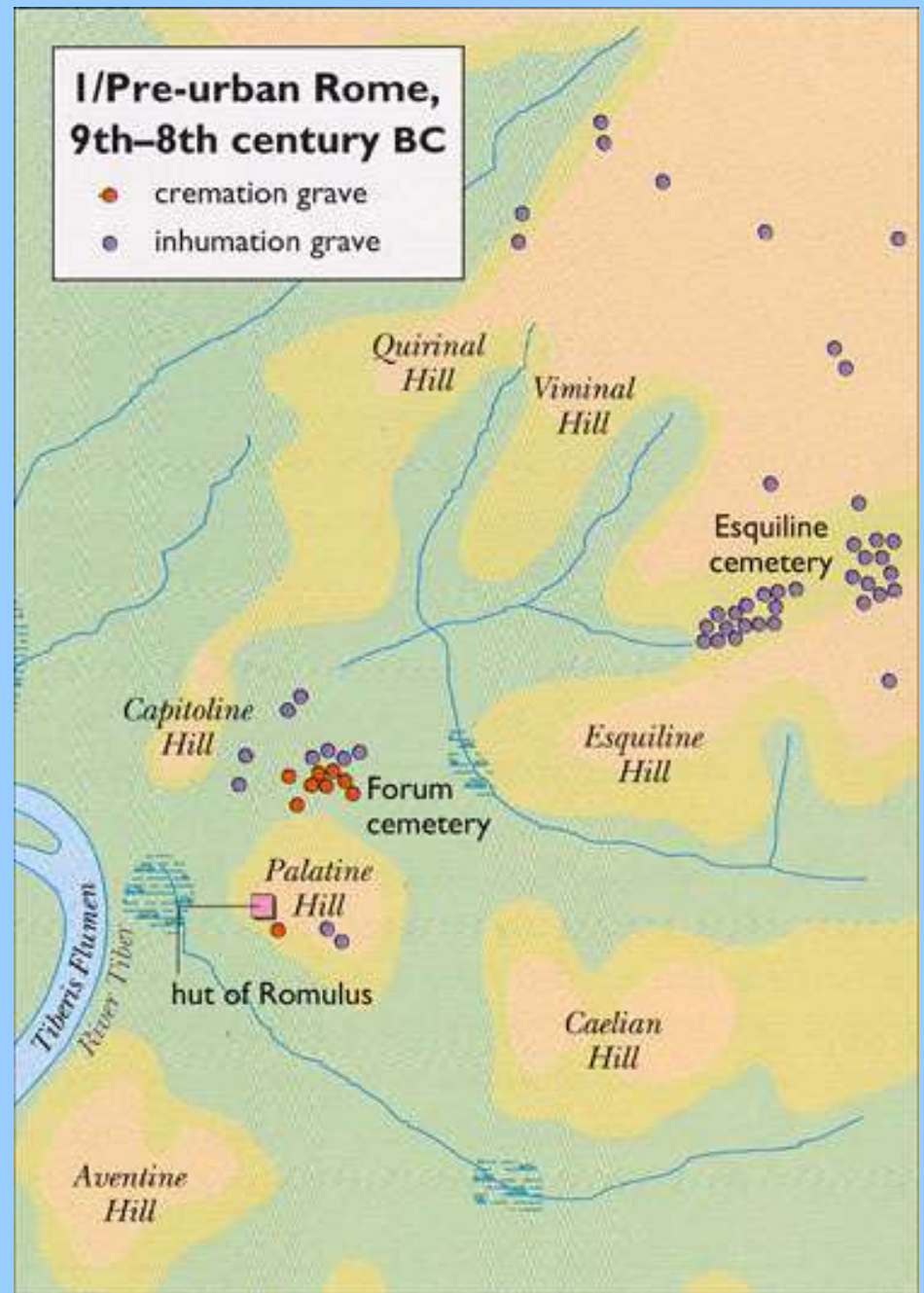
# Ancient Rome

753 BCE – According to legend, Rome was founded by Romulus and Remus.

According to Virgil, Romulus and Remus were descendants of Aeneas, son of Aphrodite.



**Capitoline Wolf**, from Rome, Italy, ca. 500–480 BCE. Bronze, approx. 2' 7 1/2" high. Palazzo dei Conservatori, Rome.

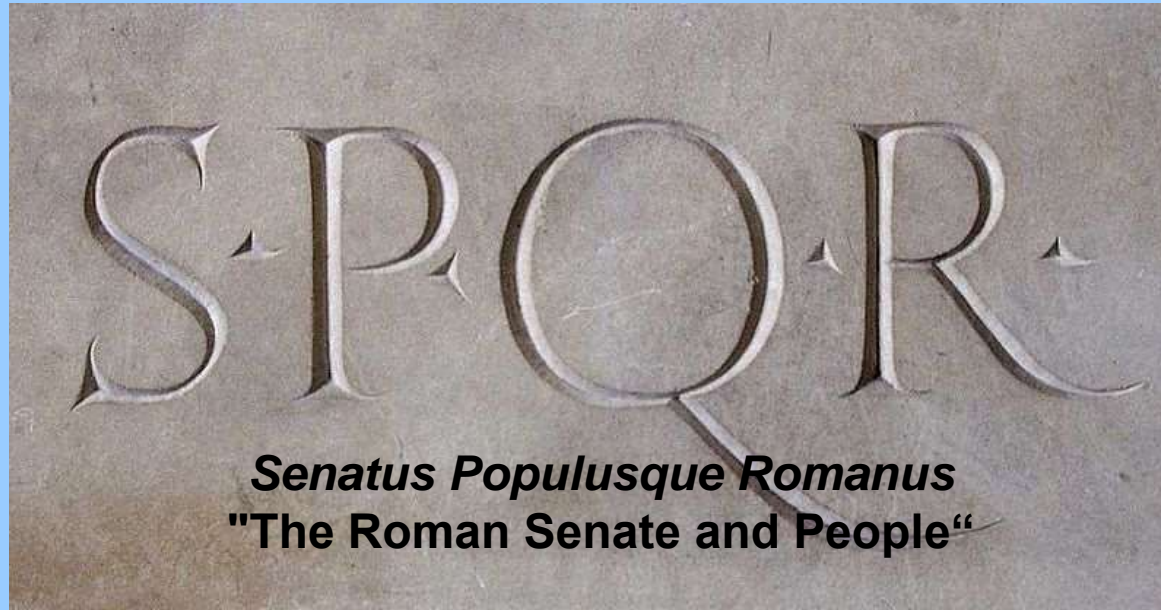


# The Roman Republic (Late 6<sup>th</sup> – 1<sup>st</sup> c. BCE)

509 BC- Expulsion of the Etruscan Kings and establishment of the Roman Republic

27 BC – End of the Republic - Augustus Becomes the First Emperor of Rome

**This formula is referring to the government of the Roman Republic, and was used as an official signature of the government.**



The Roman constitution was a republic in the modern sense of the word, in that the supreme power rested with the people; and the right to take part in political life was given to all adult male citizens.

Although it was thus nominally a democracy in that all laws had to be approved by an assembly of citizens, the republic was in fact organized as an aristocracy or broad based oligarchy, governed by a fairly small group of about fifty noble families.



**Temple of Portunus (god of harbors), Rome, Italy, ca. 75 BCE.**  
Stone (originally overlaid with white stucco in imitation of Greek marble)







**Comparison:** Model of a typical Etruscan temple of the sixth century BCE



Comparison: IKTINOS and KALLIKRATES, **Parthenon**, the Temple of Athena Parthenos Acropolis, Athens, Greece, 447–438 BCE



**Temple of Portunus**, Rome, Italy, ca. 75 BCE.  
Stone (originally overlaid with white stucco)

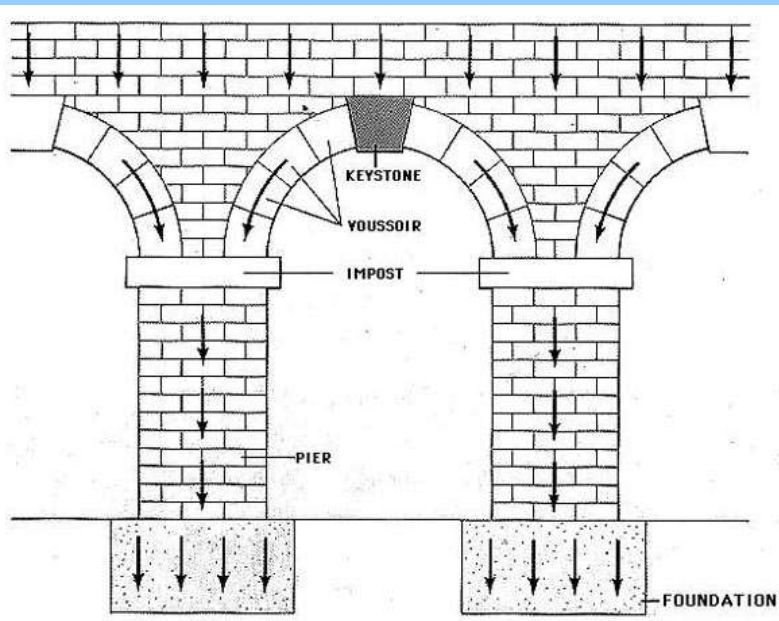
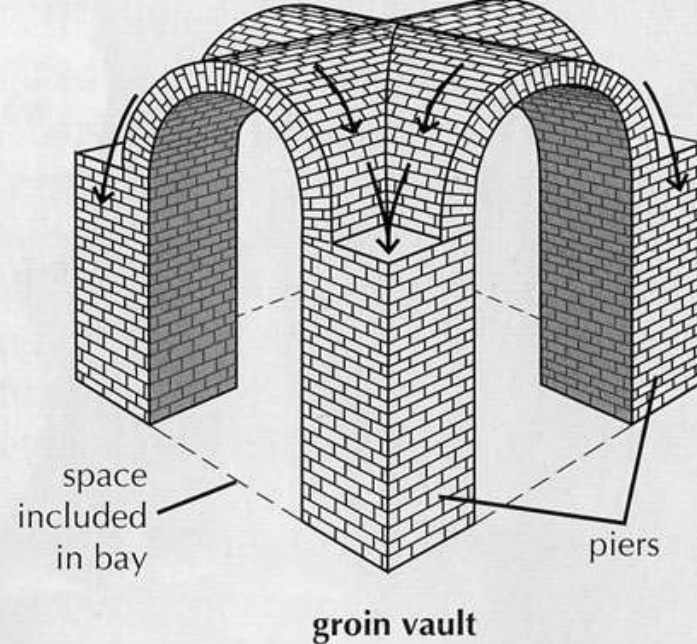
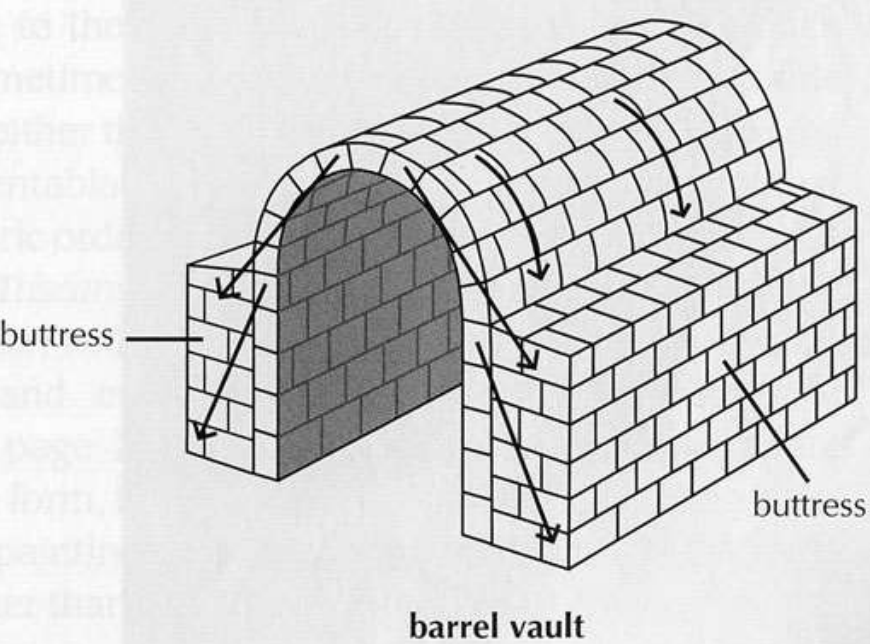


# Etruscan Arch

*Arch of Augustus.* Perugia Gate, after 310 B.C.E

The lower portions of the arch were constructed by the Etruscans. It was restored by Augustus in 40 BC.





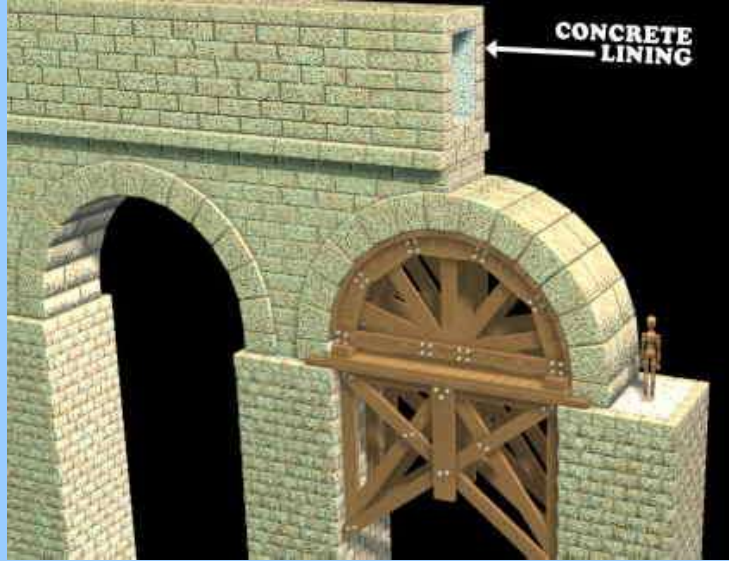
**Round arch**

**In what way is the round arch an improvement over the post and lintel?**

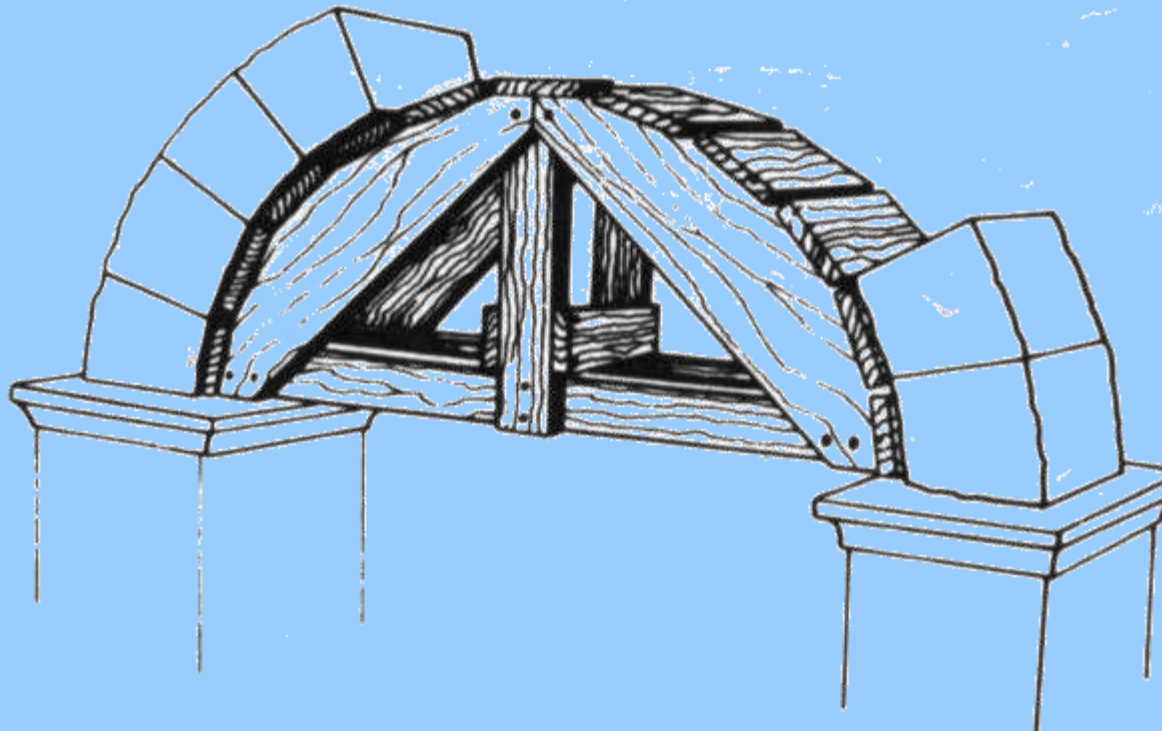
By using arches, vaults and domes, the Romans could enclose large areas.

While stone in tension tends to crack over wide spans, vaulted construction carries the structural load almost completely in compression, for which stone is well suited.

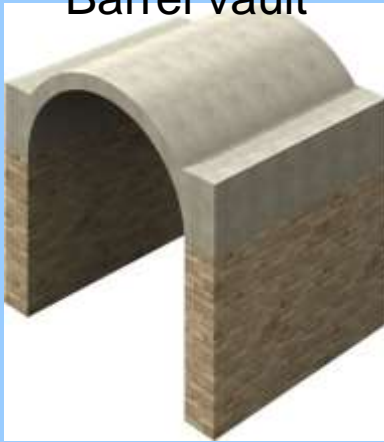




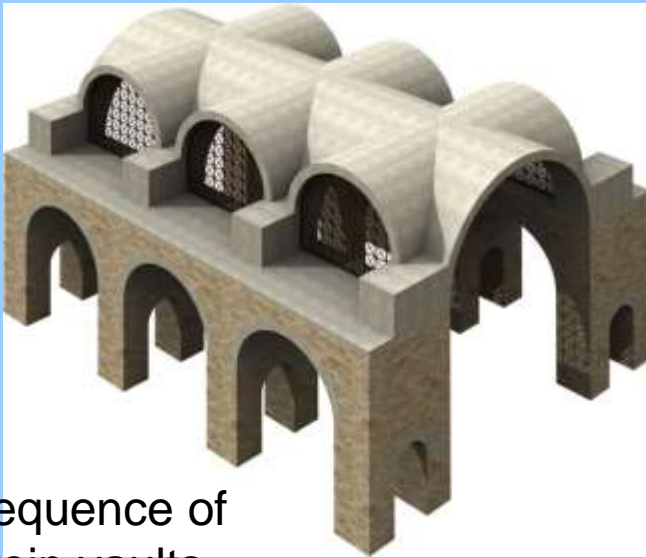
**Centering:** Temporary timber framework to support the voussoirs (wedge shaped stones) until the keystone is set in place.



Barrel vault



Groin vault



Sequence of groin vaults



Hemispherical dome with oculus.

**Roman concrete construction**





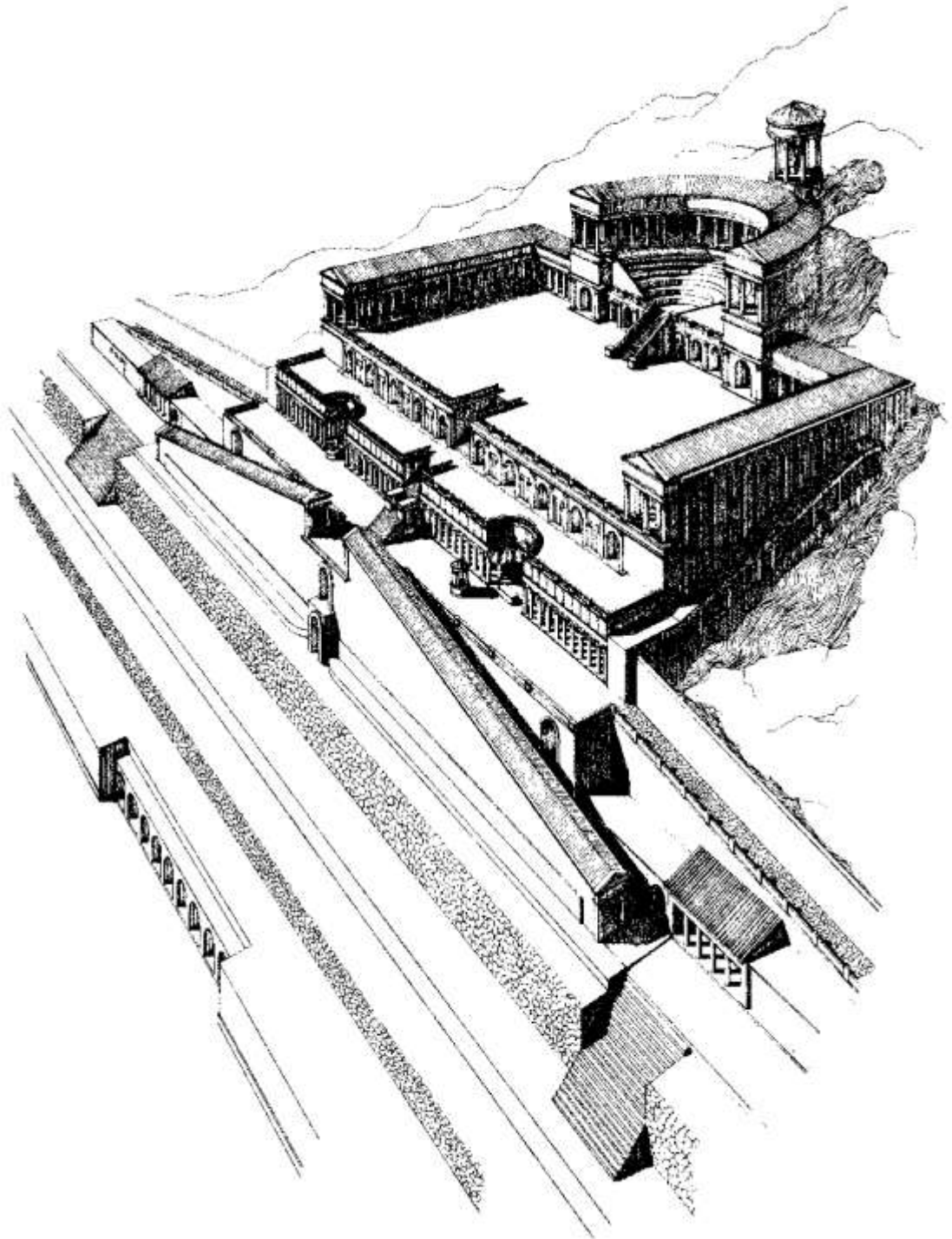
**Sanctuary of Fortuna Primigenia (goddess of good fortune), Palestrina, Italy, late second century BCE.**



Roman **concrete** was made from a changing recipe of lime mortar, volcanic sand (Pozzolana), water and small stones.

Builders placed the mixture in wooden frames and left it to dry. When the concrete hardened they removed the wooden frames.

Reconstruction drawing of the Sanctuary of Fortuna Primigenia, Palestrina, Italy, late second century BCE.





Restored view of the Sanctuary of Fortuna Primigenia, Palestrina, Italy, late second century BCE .





**Fortuna Holding Cornucopia (horn of plenty).** 3<sup>rd</sup> c. CE. Silver. From Chaourse, France  
London, British Museum.



Model of the Sanctuary of Fortuna Primigenia, Palestrina, Italy, 2<sup>nd</sup> c. BCE.



Model of the Sanctuary of Fortuna Primigenia, Palestrina, Italy, 2<sup>nd</sup> c. BCE.



**Comparison (Hellenistic period) Reconstructed west front of the Altar of Zeus from Pergamon. Turkey, ca. 175 BCE. Staatliche Museen, Berlin.**

# The Early Empire (1<sup>st</sup> c. BCE – 1<sup>st</sup> c. CE)







**Model of the city of Rome. 4<sup>th</sup> c. CE.** Temple of Fortuna Virilis, 2) Circus Maximus. 3) Palatine Hill, 4) Temple of Jupiter Capitolinus, 5) Pantheon, 6) Column of Trajan, 7) Forum of Trajan, 8) Market of Trajan, 9) Forum of Julius Ceasar, 10) Forum of Augustus, 11) Forum Romanum, 12) Basilica Nova, 13) Arch of Titus, 14) Temple of Venus and Roma, 15) Arch of Constantine, 16) Colossus of Nero, 17) Colosseum.





**Model of an insula, (pl. insulae) Ostia, Italy, 2<sup>nd</sup> c. CE. Originally: Brick faced concrete Museo della Civiltà Romana, Rome.**





Model of an insula, Ostia, Italy, second century CE. Museo della Civiltà Romana, Rome.

## Aqueduct

A channel for supplying water; often underground, but treated architecturally on high arches when crossing valleys or low ground.



**Pont-du-Gard**, Nîmes, France, ca. 16 BCE.

Approximately 900' long and 160' high. The aqueduct provided about 100 gallons of water a day per person, from a source some 30 miles away from Nimes.



## **Pont-du-Gard, Detail**

Each large arch spans some 82' and is constructed of blocks weighing up to two tons each.







**Comparison: POLYKLEITOS THE YOUNGER, Theater, Epidauros, Greece, ca. 350 BCE.**

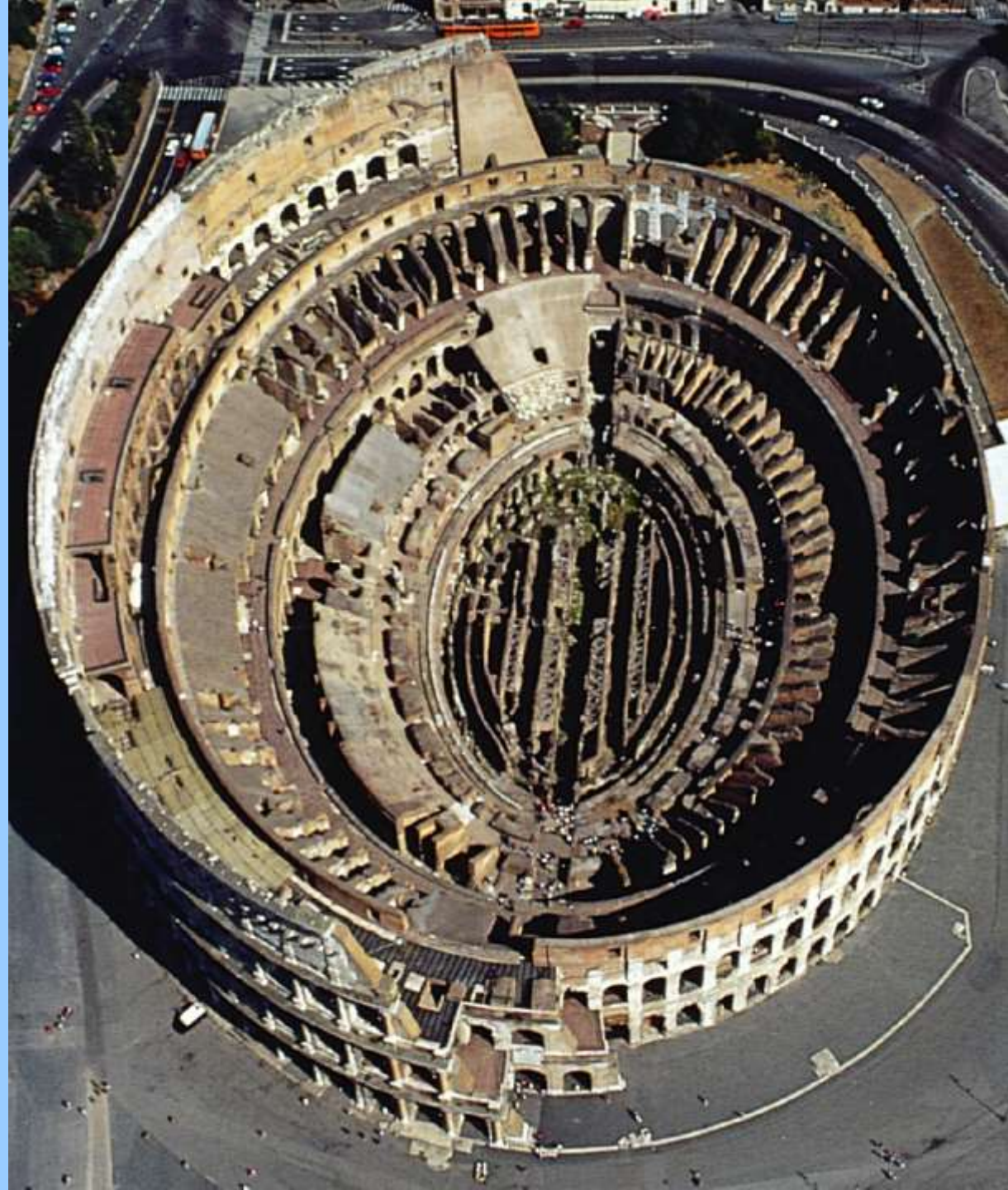
**Colosseum  
(Flavian Amphitheater)**  
Rome, Italy, ca. 70–80 CE.  
160' high





"Two things only the people anxiously desire - bread and circuses (bread and games)."

Juvenal (Roman writer)

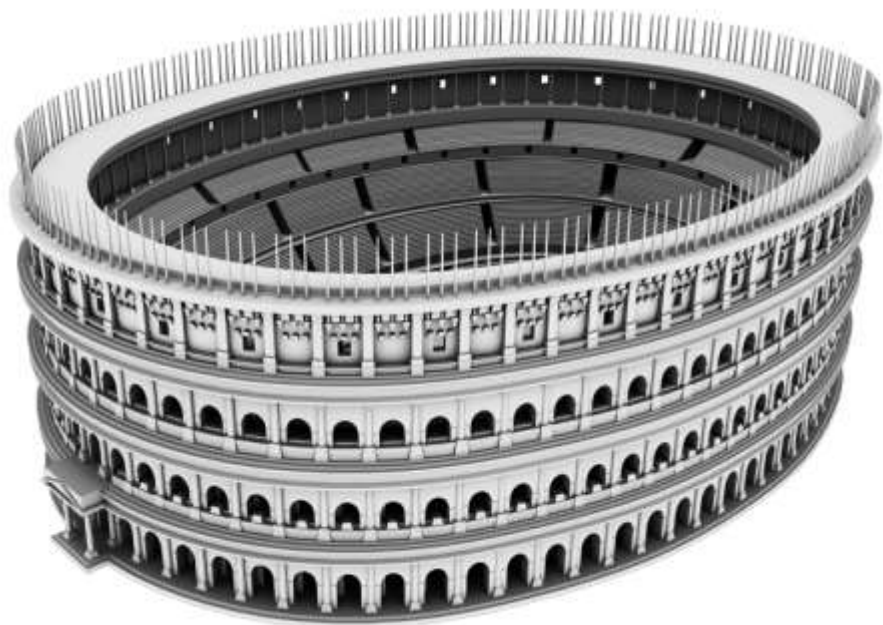


**Colosseum**

**(Flavian Amphitheater)**

Rome, Italy, ca. 70–80 CE.

160' high



Detail, outer wall



## Detail

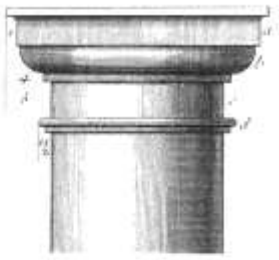
Curving, outer wall: three  
arcade and attic story



Chapiteaux des cinq Ordres avec le Chapiteau Ionique Moderne

Chapiteau Tuscan

Chapiteau Dorique



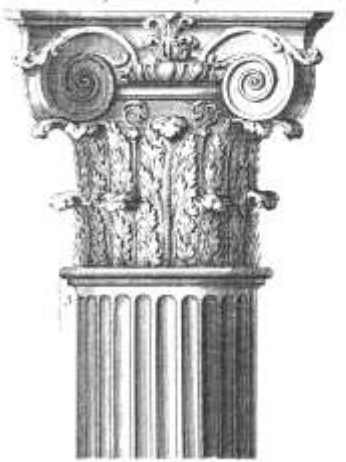
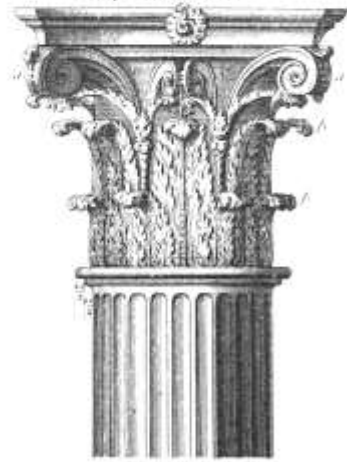
Chapiteau Ionique

Chapiteau Ionique Moderne



Chapiteau Corinthien

Chapiteau Composite



à Module, ou 24 modules

An illustration of the five orders engraved for the Encyclopédie, vol. 18, showing the Tuscan and Doric orders (top row); two versions of the Ionic order (center row); Corinthian and Composite orders (bottom row)





Detail of seating



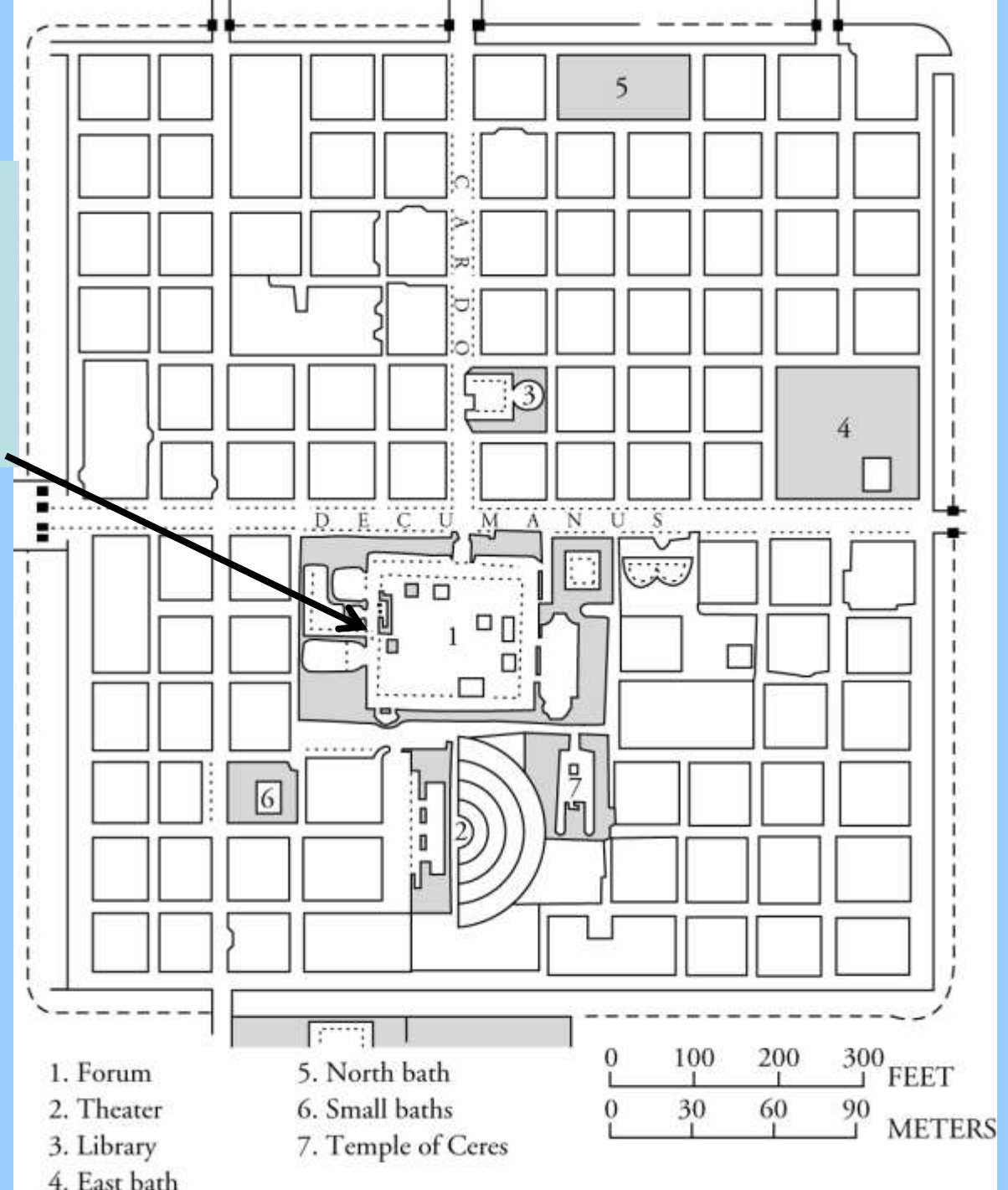
High Empire ( 2<sup>nd</sup> c. CE)



# The Roman Empire at Its Height



**Forum:** Public square of an ancient Roman city; site of temples and administrative buildings and used as a market or gathering area for the citizens.



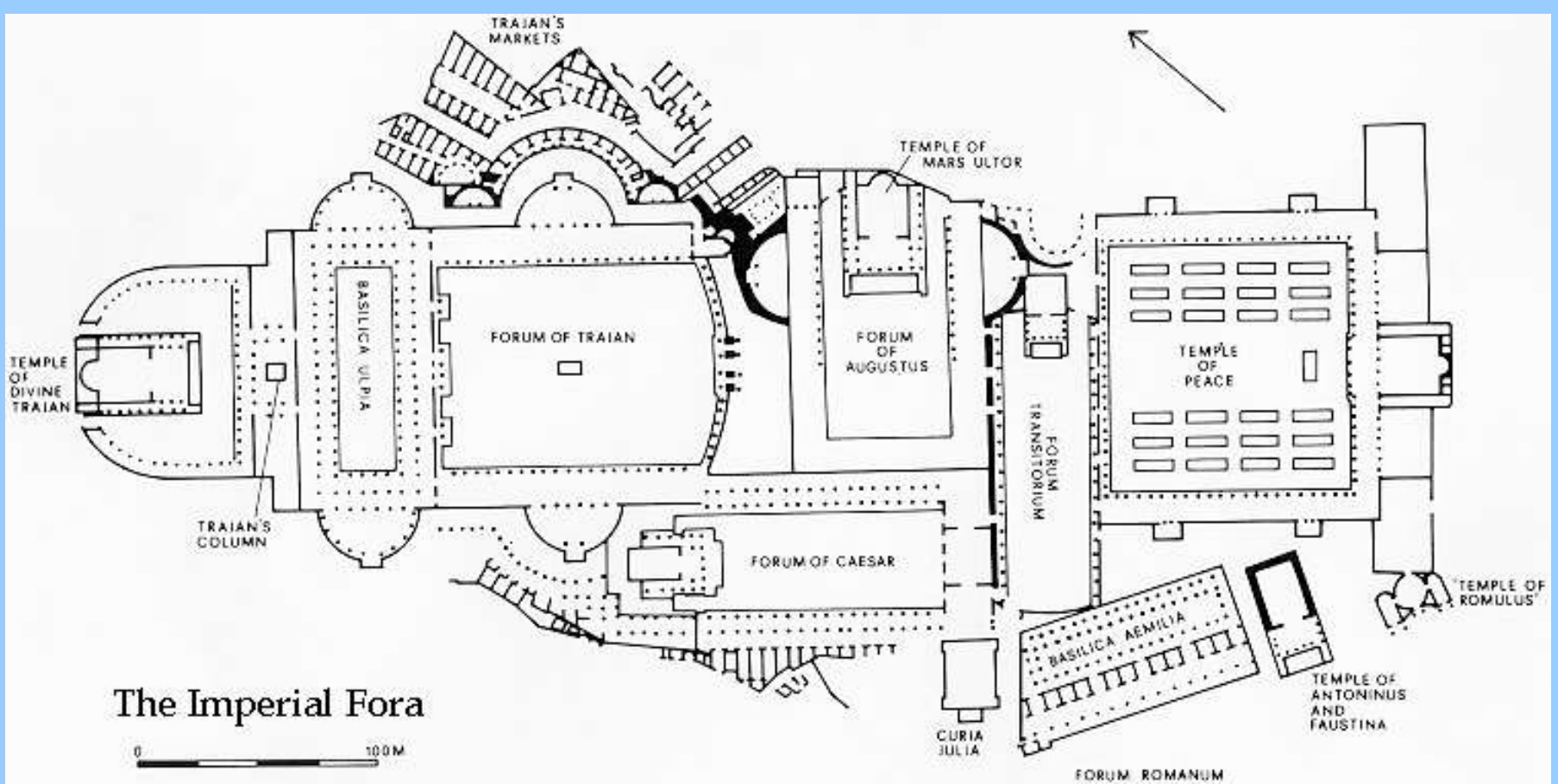
## Plan of Timgad

(Thamugadi), Algeria,  
founded 100 CE by Trajan



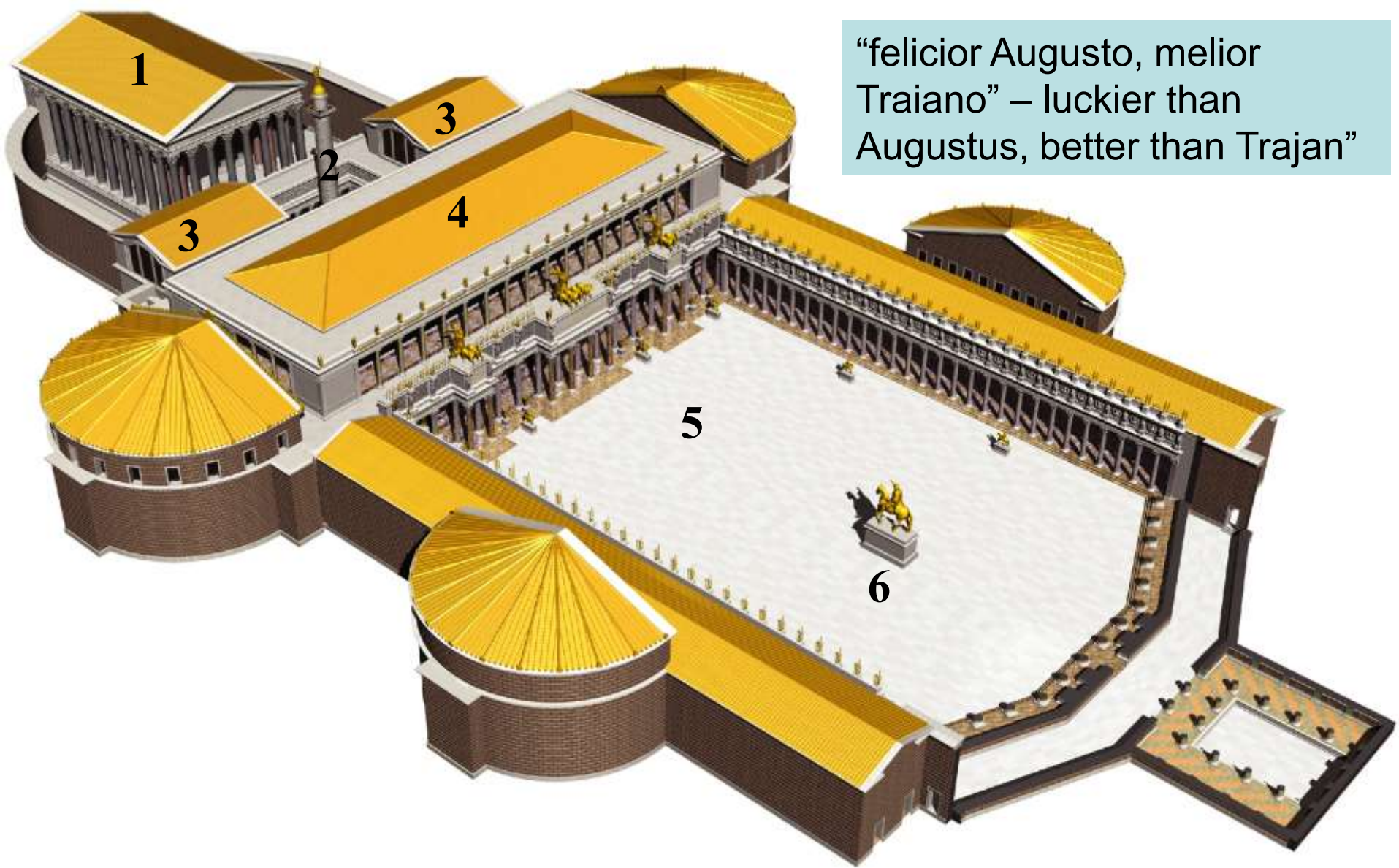
Aerial view of  
Timgad  
(Thamugadi),  
Algeria, founded  
100 CE.





Plan of the imperial fora at Rome, showing the great Forum of Trajan. Of this vast project, only the markets and Trajan's column (located between the two library buildings) have survived.

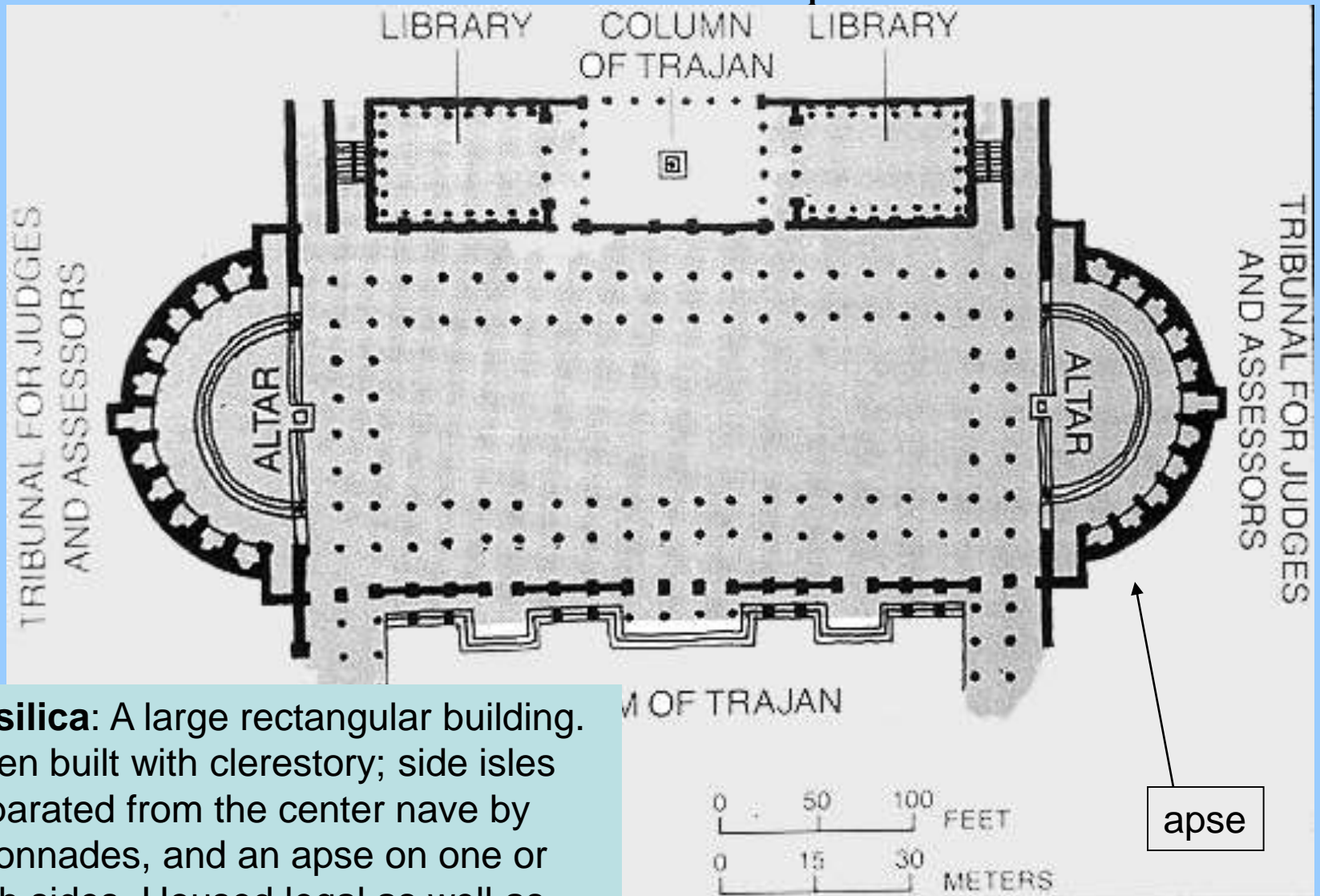




“felicior Augusto, melior Traiano” – luckier than Augustus, better than Trajan”

**Apollodorus of Damascus, model of Forum of Trajan, Rome, Italy, dedicated 112 CE.** 1) Temple of Trajan (Dedicated to Trajan by Hadrian), 2) Column of Trajan, 3) Libraries, 4) Basilica Ulpia, 5) Forum, 6) Equestrian statue of Trajan.

## Plan of Basilica Ulpia

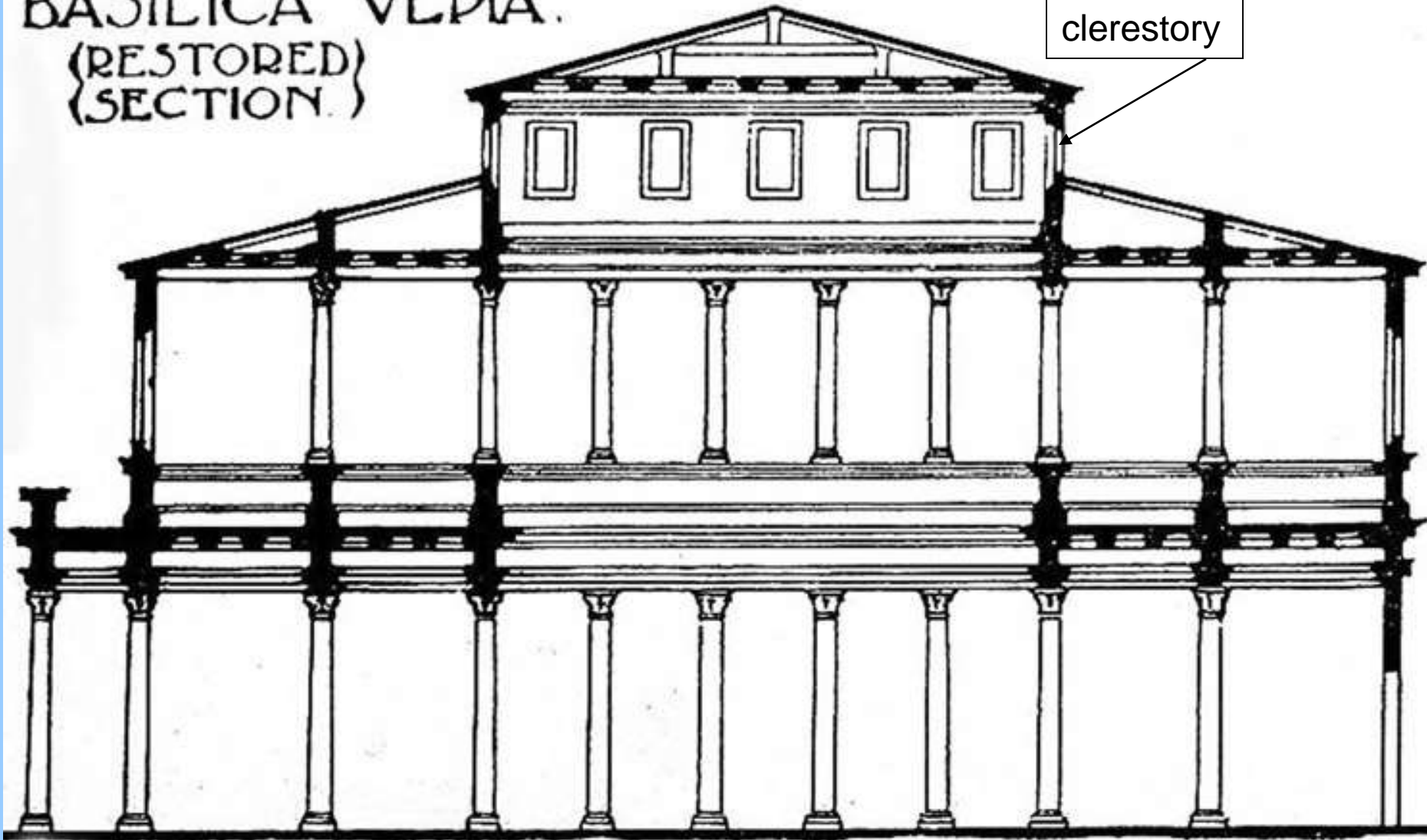


**Basilica:** A large rectangular building. Often built with clerestory; side isles separated from the center nave by colonnades, and an apse on one or both sides. Housed legal as well as commercial and social activities.

**Apse:** a projecting part of a building that is usually semicircular in plan and vaulted



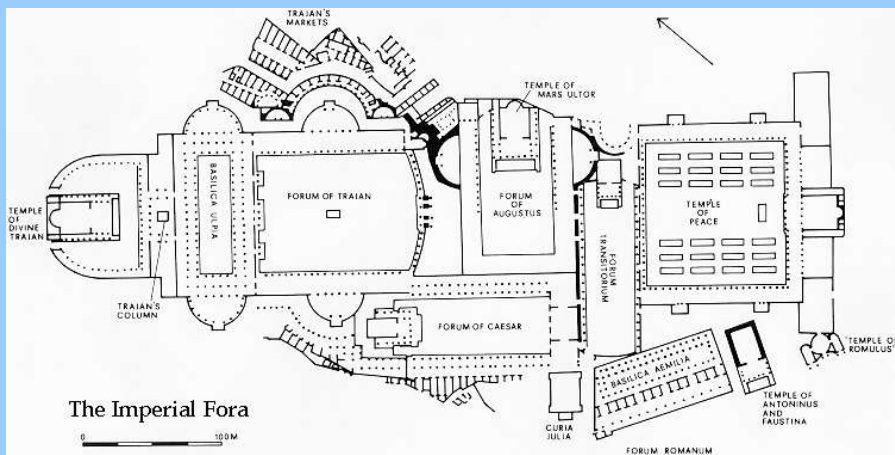
BASILICA VLPDIA.  
(RESTORED)  
(SECTION.)



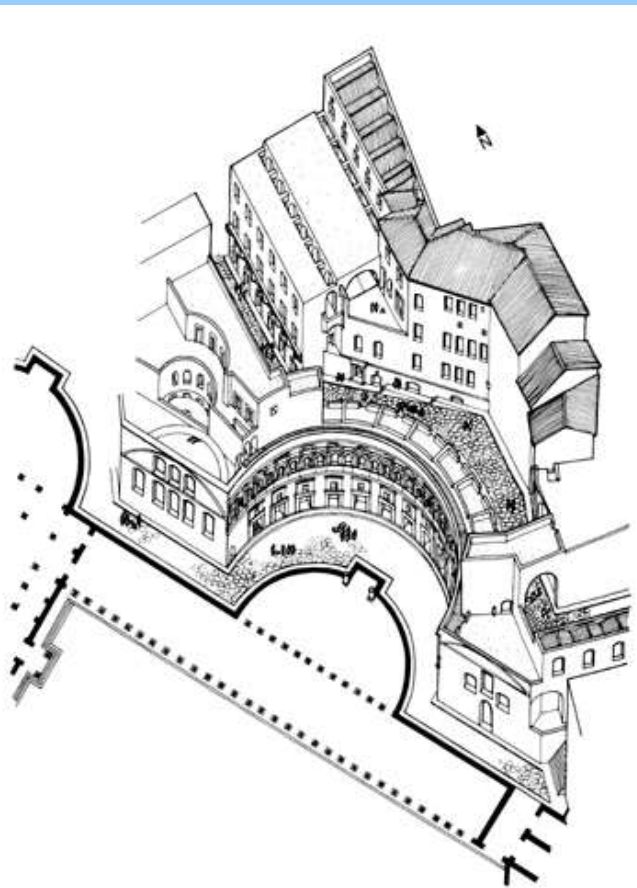
clerestory

10 5 0  
SCALE

100 150  
OF FEET.



The markets are built into the hillside in a series of shops that form a semicircle. Further up the hill is the vaulted market hall.



The markets contained over 150 shops, offices and groin vaulted market hall.

Axonometric drawing of *Trajan's markets*, Rome 100-14 CE.





**Apollodorus of Damascus**  
*Trajan's markets*, Rome 100-  
14 CE.  
They were built of brick faced  
concrete

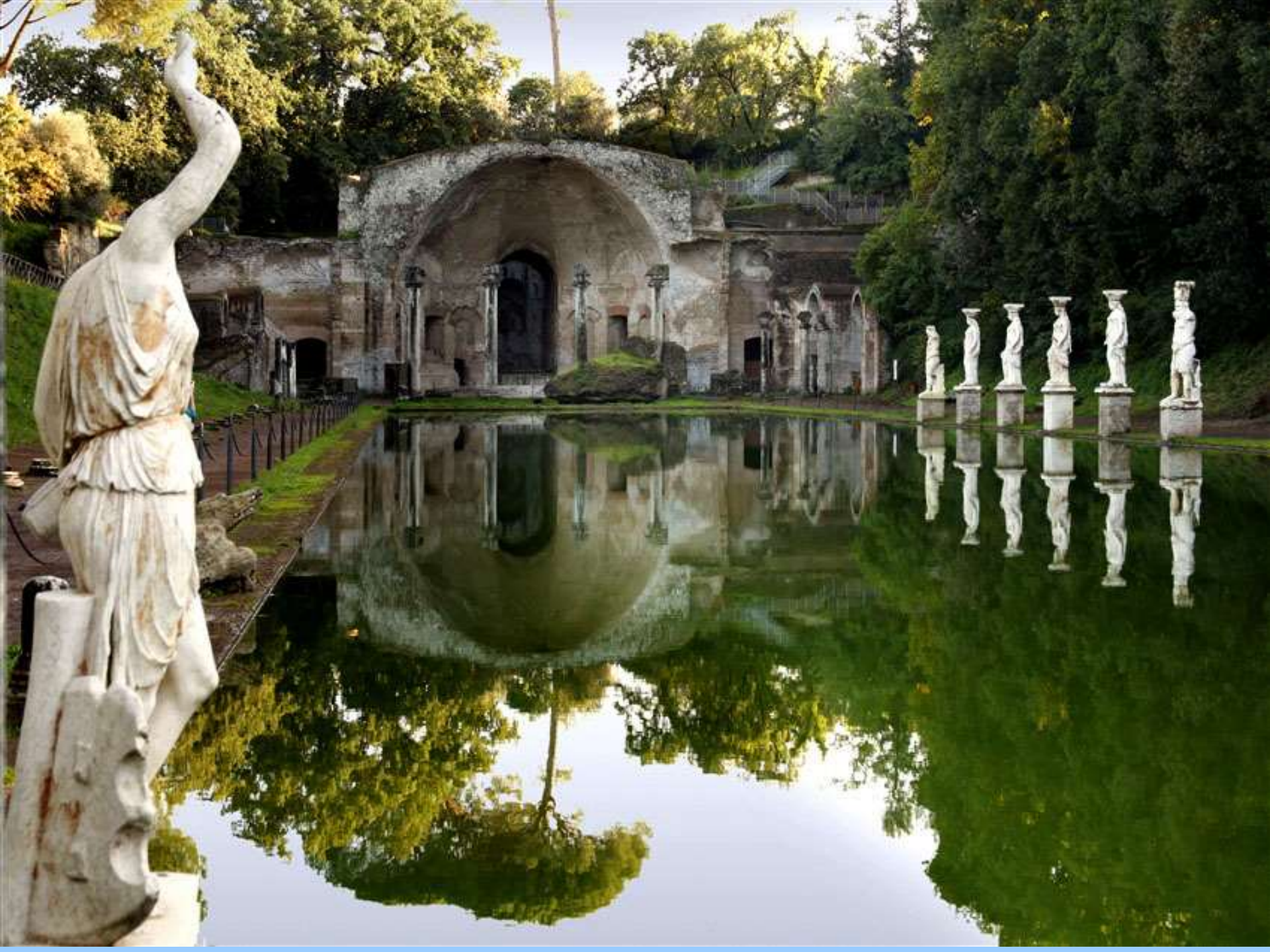


Statue of Antinous  
from Hadrian's Villa

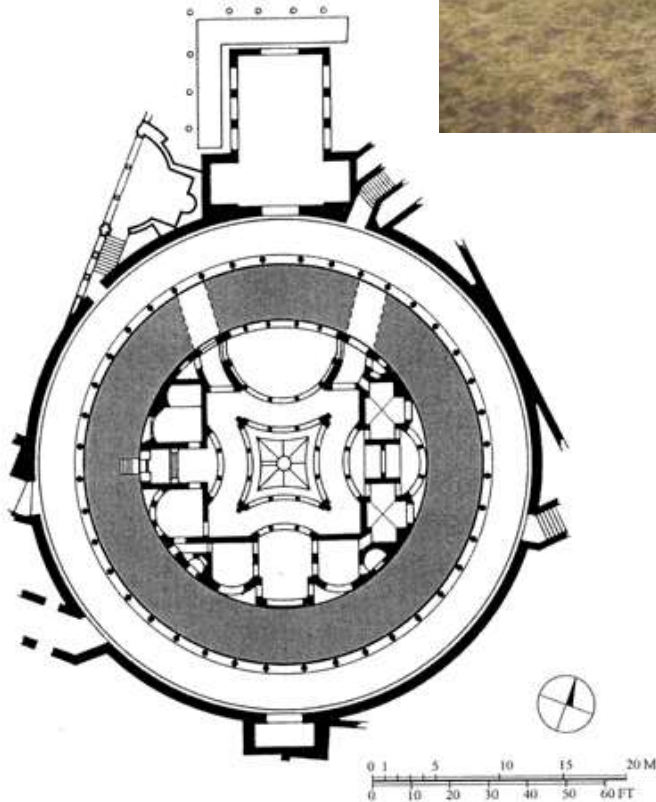


*Colonnade with replicas of Greek statues. Hadrian's Villa, Tivoli, Italy, ca. 130–138 CE. The villa was a complex of over 30 buildings, covering an area of at least 1 square kilometre (c. 250 acres)*









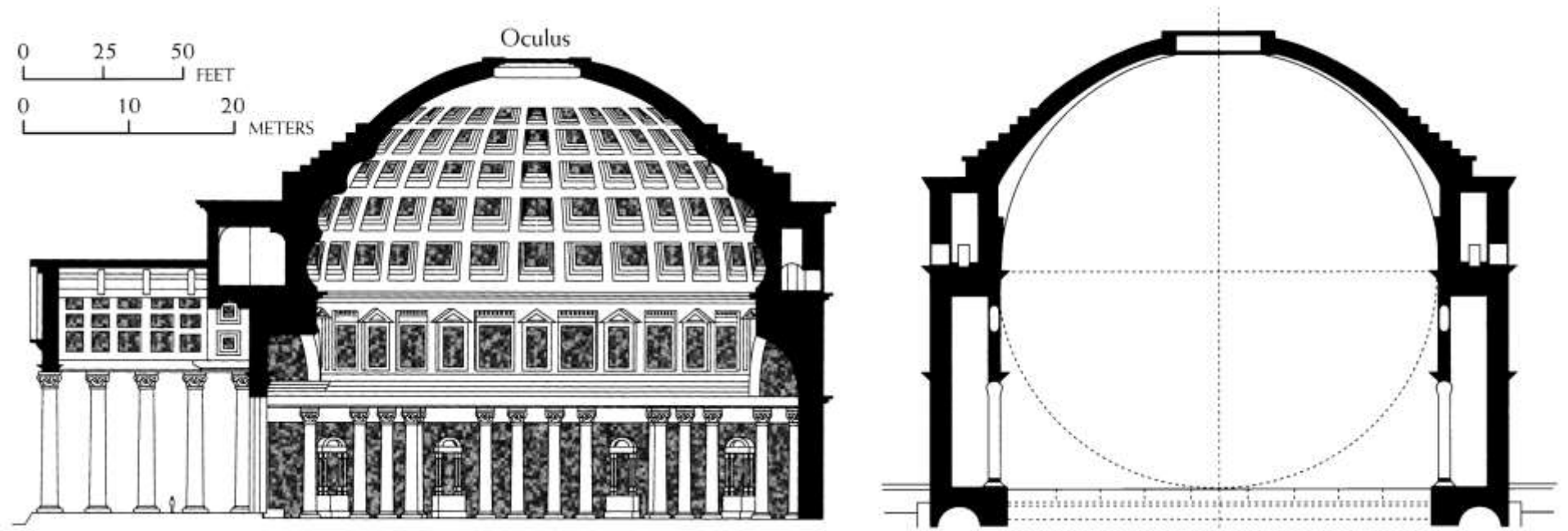
## The Island Enclosure (Maritime Theater) at Hadrian's Villa.

- Pushing and pulling spatial enclosures creating a virtuoso composition of interlocking forms.



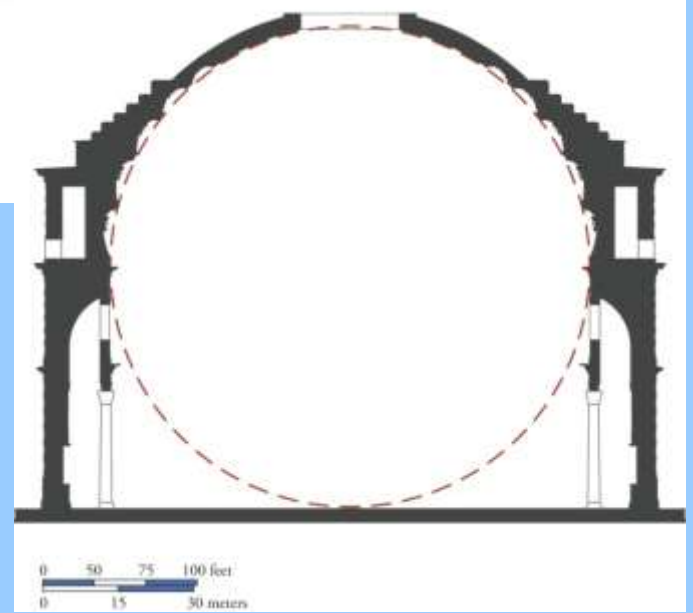


*Pantheon* ("Temple of all the Gods"), Rome, Italy, 118–125 CE. Built by Hadrian.

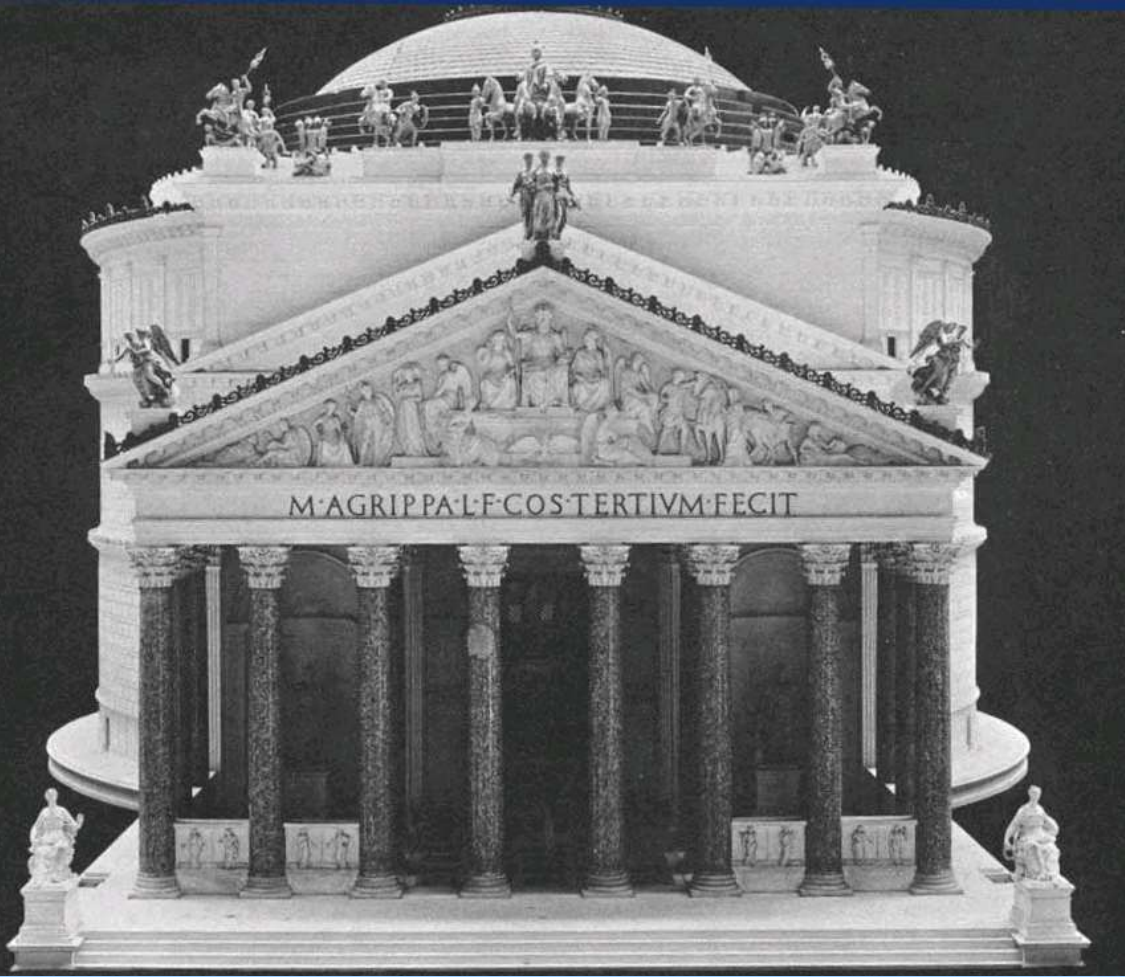


**Longitudinal and lateral sections of the Pantheon, Rome, Italy, 118–125 CE.**





Restored cutaway view (*left*) and lateral section (*right*) of the Pantheon, Rome, Italy, 118–125 CE.



Model of the Pantheon

*Aerial view of the Pantheon ("Temple of all the Gods"), Rome, Italy, 118–125 CE.*





**Coffers:**

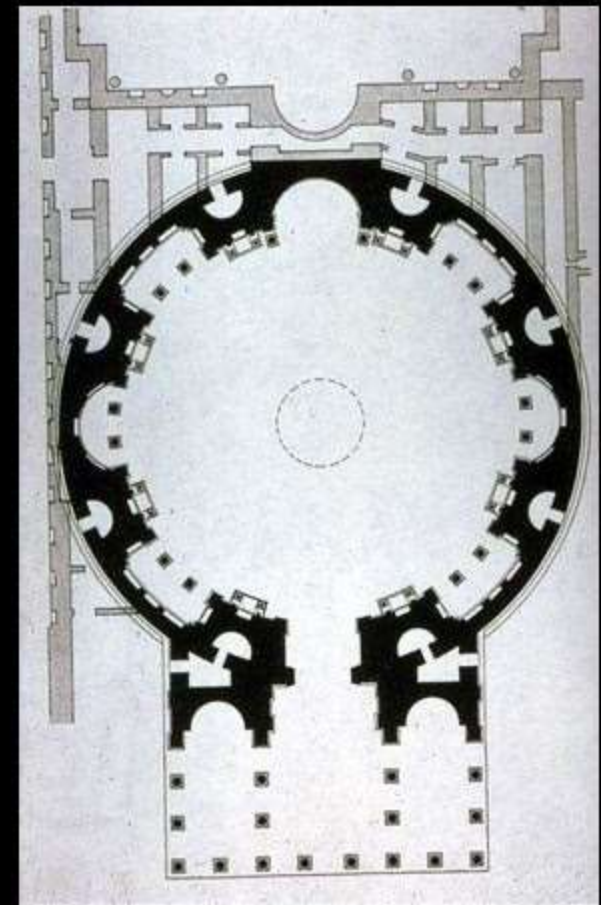
Sunken decorative panels in the shape of a square or octagon, usually in a ceiling.

**Oculus:**

A circular opening at the apex of a dome.

**Interior of the Pantheon, Rome, Italy,**  
118–125 CE. 142' high. Built by  
Hadrian.





- Ground level Corinthian order of fluted columns and pilasters supporting an attic story with rectangular openings resembling windows.
- The lower story is varied by eight niches, alternately semi circular and rectangular

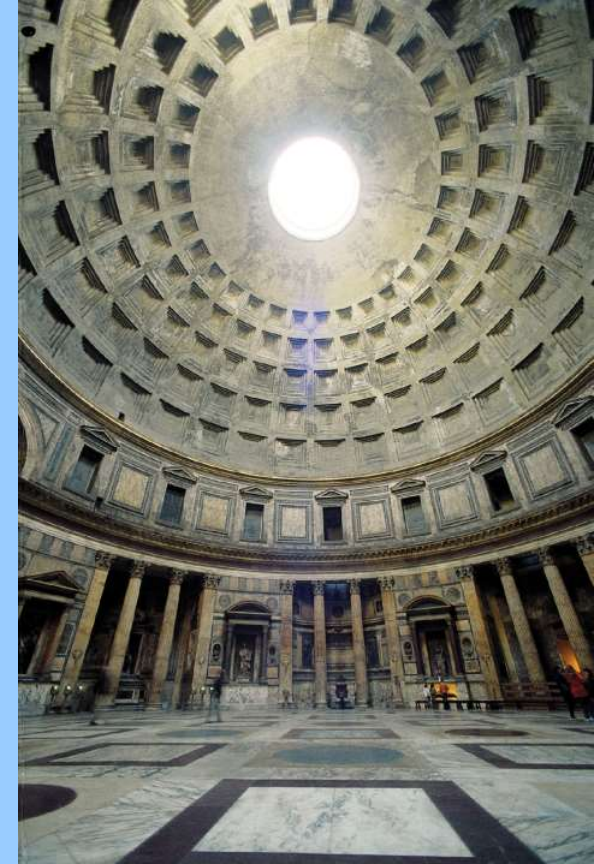




Interior detail: Wall decoration with pediments over niches



- Much fine external marble as well as the pediment sculptures were removed over the centuries
- The Byzantine Emperor Constans II visited Rome in the 7<sup>th</sup> c. and stripped off the roof of the Pantheon
- In the 17th c., Pope Urban VIII Barberini tore away the bronze ceiling of the portico ("What the barbarians did not do the Barberini did").







Forum of Trajan, Rome,  
112 CE.



Temple of  
Portunus,  
Rome, Italy, ca.  
75 BCE.  
Stone



The Sanctuary of Fortuna.  
Primigenia, Palestrina, Italy,  
2<sup>nd</sup> c. BCE.

### Discussion Question

You have been asked to give a lecture on Roman civic building projects. Which examples should you discuss and why?



The Pantheon,  
Rome, 118–125  
CE.



Colosseum  
Rome, Italy, c.  
a. 70–80 CE,  
160' high