Name: _____

Date: _____

ROMAN TECHNOLOGY

Roman engineers transformed their capital into the most advanced city of the ancient world. Their roads, bridges, aqueducts, and sewers helped unite the largest empire of its time.

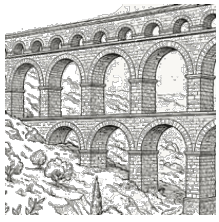
Roman Roads

The Romans particularly excelled at building roads. These roads made it easier to travel, move troops, collect taxes, and trade with faraway provinces. Many of the roads, bridges, and aqueducts built by the Romans are still used today. The expression, "All Roads Lead to Rome," refers to the fact that Rome stood at the center of the empire's vast road network.

Roman roads were engineering marvels. Workers first dug a deep trench and filled it with layers of stone and gravel to create a solid foundation. Large paving stones formed the surface, while the road was built slightly higher in the middle so rainwater drained into ditches along the sides instead of collecting in puddles. You can still travel on roads constructed more than 2,000 years ago.

Aqueducts

Roman engineers brought water into the city by building water bridges called aqueducts. Most aqueducts carried water through covered channels that sloped gently downhill. The water flowed by gravity alone, without pumps or engines. Nine aqueducts provided the Roman people with 38 million gallons of water per day. Parts of the Roman aqueduct system still supply water to fountains in Rome.



Roman Concrete

Another Roman invention helped many of these great buildings survive for nearly 2,000 years. Roman engineers developed a remarkably durable concrete by mixing volcanic ash with lime and water. Unlike many modern concretes, it became even stronger over time, especially when exposed to water. This allowed the Romans to build massive bridges, harbors, temples, and domes that still stand today. Scientists continue to study Roman concrete in hopes of creating longer-lasting building materials.

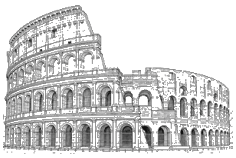
Amphitheaters

The Romans built many huge stadiums called amphitheaters. People would gather in amphitheaters to watch shows with clowns, jugglers, acrobats, trained animals, and dramatic performances. Some festivals lasted for several days and drew thousands of spectators.

Gladiators

Some Roman entertainment was very cruel. People would watch fights between wild animals and gladiators. Gladiators were usually slaves or criminals who fought with swords against animals or one another. Before each contest, thousands of cheering spectators filled the amphitheater as musicians played and the fighters entered the arena. A skillful gladiator might win his freedom by defeating an opponent. It wass not unusual for a gladiator to be killed.

The Colosseum



The greatest Roman amphitheater, the Colosseum, still dominates the Roman skyline. Completed in 80 CE, it could seat about 50,000 spectators. Crowds entered through dozens of numbered entrances, allowing the massive stadium to fill in just a few minutes. Only a portion of the Colosseum remains standing. Earthquakes destroyed some of the structure. Today, millions of tourists walk through the Colosseum each year, following the same passageways once used by Roman spectators. Some of the stone used to build St. Peter's Basilica, the church in the Vatican where the Pope resides, came from the Colosseum.

Rome's Sewers

Perhaps the greatest Roman engineering achievement was the sewer. Rome was built among seven hills beside the Tiber River, where rainwater often collected in the low-lying valleys. Roman engineers built a vast sewer system to carry away

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wastewater and drain marshes, making the city cleaner and healthier.

The population of the city of Rome swelled to more than one million people at the height of the empire.

Fill in the Blanks

Roman engineers t__a__s__o__m__d their capital into the most a__v__nc__d city of the ancient world. Roads made it easier to t__a__el, move t__oo__s, collect t__x__s, and trade with faraway p__o__i__c__s, giving rise to the saying "All R__a__s Lead to Rome." A__u__d__c__s are w__t__r bridges built by Roman engineers that provided the Roman people with 38 million g__l__o__s of w__t__r per day. Roman engineers also developed a remarkably durable c__n__r__te that became even s__r__ng__r over time, allowing them to build massive b__i__g__s, harbors, t__m__les, and domes that still stand today. The Romans built huge a__p__i__h__a__e__s, where people watched g__a__i__t__rs fight against a__i__a__s or one another. The C__l__s__e__m, the greatest Roman a__p__i__h__a__er, could seat about 50,000 s__e__t__to__s. Rome also built a vast s__w__r system to carry away wastewater, helping the city's p__p__l__t__on swell past one m__l__i__n people.

Answer in Complete Sentence

1. Why did the Romans value a high-quality road system?

_____

_____

_____

2. What was significant about Roman concrete?

_____

_____

_____

3. Roman leaders encouraged some of the more bloodthirsty elements of Roman entertainment. Do you think this type of entertainment is good or bad for a society? Explain your answer.

_____

_____

_____

_____

*This is a higher order learning question. You must answer the question to the best of your ability, but any reasonable answer will be graded as correct.

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