




**WHAT IS A  
SCALE  
DRAWING?**

**A SCALE DRAWING  
IS A  
REPRESENTATION  
OF AN OBJECT OR  
SPACE WHERE THE  
DIMENSIONS ARE  
PROPORTIONALLY  
REDUCED OR  
ENLARGED  
COMPARED TO THE  
ACTUAL OBJECT.**



  
**HOW CAN  
YOU  
DETERMINE  
THE SCALE  
FACTOR OF  
A SCALE  
DRAWING?**

**THE SCALE  
FACTOR IS  
DETERMINED  
BY COMPARING  
CORRESPONDING  
LENGTHS IN  
THE DRAWING  
AND THE  
ACTUAL  
OBJECT.**



**A SCALE  
DRAWING HAS  
A SCALE  
FACTOR OF 1:5.  
THE ACTUAL  
LENGTH IS 20  
CM, WHAT IS  
THE LENGTH IN  
THE  
DRAWING?**



**THE LENGTH  
IN THE  
DRAWING IS  
4 CM.**



**IN A SCALE  
DRAWING WITH  
A SCALE  
FACTOR OF 2:3,  
IF THE ACTUAL  
WIDTH IS 15  
CM, WHAT IS  
THE WIDTH IN  
THE DRAWING?**



**THE WIDTH  
IN THE  
DRAWING IS  
10 CM**





**WHAT DOES  
A SCALE  
FACTOR OF  
1:1 MEAN IN  
A SCALE  
DRAWING?**

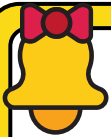


**THE DRAWING  
IS THE SAME  
SIZE AS THE  
ACTUAL  
OBJECT; THERE  
IS NO  
REDUCTION OR  
ENLARGEMENT.**



**IF THE SCALE  
FACTOR OF A  
MODEL CAR IS  
1:50, AND THE  
LENGTH OF THE  
ACTUAL CAR IS  
4 METERS,  
WHAT IS THE  
LENGTH OF THE  
MODEL?**

**THE LENGTH  
OF THE  
MODEL CAR  
IS 8 CM**



**HOW DO YOU  
CREATE AN  
ENLARGED  
SCALE  
DRAWING?**



**MULTIPLY THE  
DIMENSIONS OF  
THE ACTUAL  
OBJECT BY THE  
SCALE FACTOR  
TO OBTAIN THE  
DIMENSIONS OF  
THE ENLARGED  
DRAWING.**



**WHAT IS THE  
PURPOSE OF  
USING A SCALE  
DRAWING IN  
REAL-LIFE  
APPLICATIONS?**



**TO REPRESENT  
OBJECTS OR  
SPACES  
ACCURATELY  
WHILE FITTING  
THEM ONTO A  
MANAGEABLE-  
SIZED PIECE OF  
PAPER.**



**IF THE SCALE FACTOR IS 1:3 AND THE ACTUAL HEIGHT IS 90 CM, WHAT IS THE HEIGHT IN THE SCALE DRAWING?**



**THE HEIGHT IN THE DRAWING IS 30 CM**



**HOW CAN YOU CHECK IF A DRAWING IS AN ACCURATE SCALE REPRESENTATION OF AN OBJECT?**



**COMPARE THE RATIOS OF CORRESPONDING LENGTHS IN THE DRAWING AND THE ACTUAL OBJECT TO ENSURE THEY ARE EQUAL.**



**IN A SCALE DRAWING WITH A SCALE FACTOR OF 1:4, IF THE ACTUAL DISTANCE IS 80 METERS, WHAT IS THE DISTANCE IN THE DRAWING?**



**THE DISTANCE IN THE DRAWING IS 20 METERS**



**EXPLAIN THE CONCEPT OF A SCALE IN THE CONTEXT OF SCALE DRAWINGS.**



**A SCALE IS THE RATIO OF A LENGTH ON A SCALE DRAWING TO THE CORRESPONDING LENGTH ON THE ACTUAL OBJECT.**





IF A RECTANGULAR ROOM IS REPRESENTED BY A SCALE DRAWING WITH A LENGTH OF 8 CM AND A WIDTH OF 4 CM, AND THE SCALE FACTOR IS 1:10, WHAT ARE THE ACTUAL DIMENSIONS OF THE ROOM?



THE ACTUAL LENGTH IS 80 METERS AND THE ACTUAL WIDTH IS 40 METERS.



WHAT HAPPENS TO THE SCALE FACTOR IF THE DRAWING IS AN ENLARGEMENT?



THE SCALE FACTOR IS GREATER THAN 1 IN AN ENLARGEMENT.



IF THE SCALE FACTOR OF A DRAWING IS 1:2 AND THE ACTUAL PERIMETER IS 30 CM, WHAT IS THE PERIMETER OF THE DRAWING?



THE PERIMETER OF THE DRAWING IS 15 CM.



HOW DO YOU FIND THE SCALE FACTOR IF YOU KNOW THE DIMENSIONS IN BOTH THE DRAWING AND THE ACTUAL OBJECT?



DIVIDE THE LENGTH IN THE DRAWING BY THE CORRESPONDING LENGTH IN THE ACTUAL OBJECT.



IF A MAP HAS A SCALE OF 1:5000, AND THE ACTUAL DISTANCE BETWEEN TWO CITIES IS 25 KILOMETRES, WHAT IS THE DISTANCE ON THE MAP?



THE DISTANCE ON THE MAP IS 5 CM ( $25 \text{ KM} \div 5000$ ).



CAN THE SCALE FACTOR BE A FRACTION IN A SCALE DRAWING?



YES, THE SCALE FACTOR CAN BE A FRACTION, REPRESENTING A REDUCTION IN SIZE.



IF THE SCALE FACTOR OF A DRAWING IS 3:2 AND THE ACTUAL WIDTH IS 12 METERS, WHAT IS THE WIDTH IN THE DRAWING?



THE WIDTH IN THE DRAWING IS 18 METERS



HOW DO YOU CREATE A REDUCED SCALE DRAWING?



DIVIDE THE DIMENSIONS OF THE ACTUAL OBJECT BY THE SCALE FACTOR TO OBTAIN THE DIMENSIONS OF THE REDUCED DRAWING.

