A THREE-DIMENSIONAL SHAPES

A.1 IDENTIFYING FLAT OR SOLID SHAPES

MCQ 1: Is this shape flat or solid?

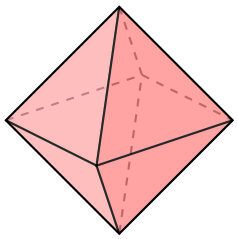
Pick the right answer:

☒ 2D shape

☐ 3D shape

Answer: It is a 2D shape because it's flat, with only length and width.

MCQ 2: Is this shape flat or solid?



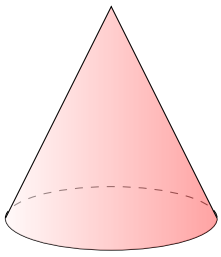
Pick the right answer:

☐ 2D shape

☒ 3D shape

Answer: It is a 3D shape because it's solid, with length, width, and depth.

MCQ 3: Is this shape flat or solid?



Pick the right answer:

☐ 2D shape

☒ 3D shape

Answer: It is a 3D shape because it's solid, with length, width, and depth.

MCQ 4: Is this shape flat or solid?

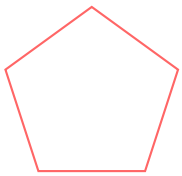
Pick the right answer:

☒ 2D shape

☐ 3D shape

Answer: It is a 2D shape because it's flat, with only length and width.

MCQ 5: Is this shape flat or solid?



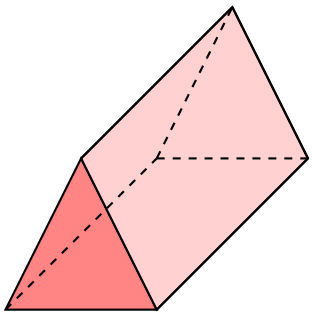
Pick the right answer:

☒ 2D shape

☐ 3D shape

Answer: It is a 2D shape because it's flat, with only length and width.

MCQ 6: Is this shape flat or solid?



Pick the right answer:

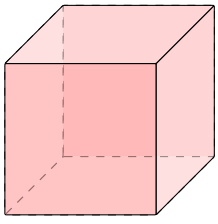
☐ 2D shape

☒ 3D shape

Answer: It is a 3D shape because it's solid, with length, width, and depth.

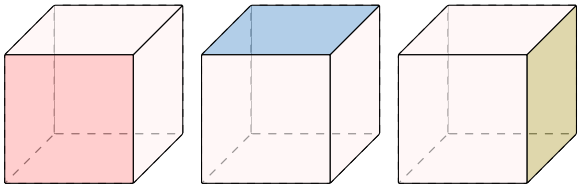
A.2 COUNTING FACES

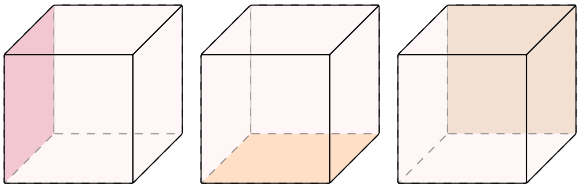
Ex 7: How many faces does this cube have?



6 faces

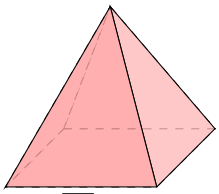
Answer: Count each flat surface to find the number of faces.





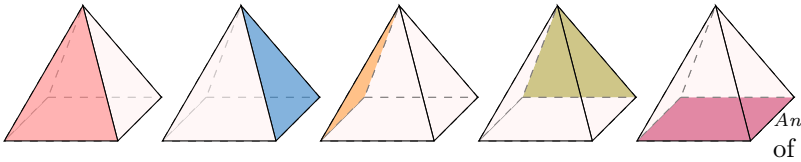
There 6 faces.

Ex 8: How many faces does this square Pyramid have?



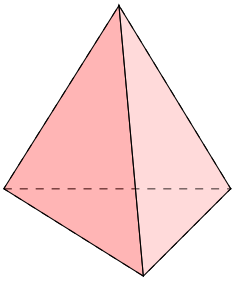
5 faces

Answer: Count each flat surface to find the number of faces



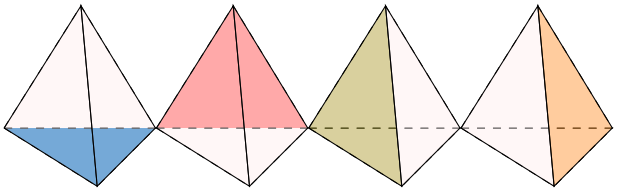
There are **5 faces**.

Ex 9: How many faces does this triangular pyramid have?



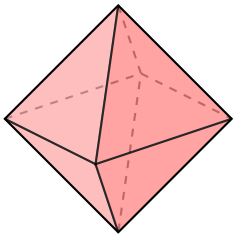
4 faces

Answer: Count each flat surface to find the number of faces.



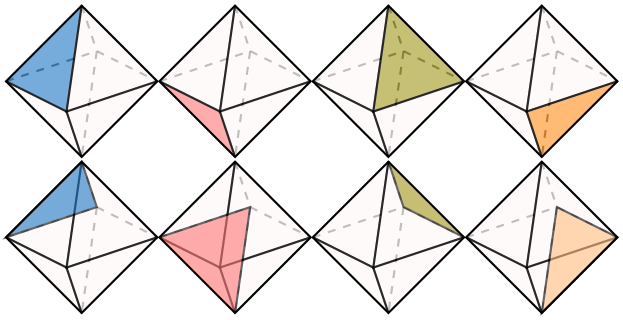
There are **4 faces**.

Ex 10: How many faces does this eight-faced die have?



8 faces

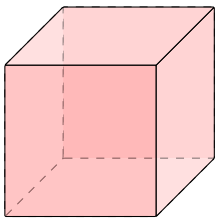
Answer: Count each flat surface to find the number of faces.



There are **8 faces**.

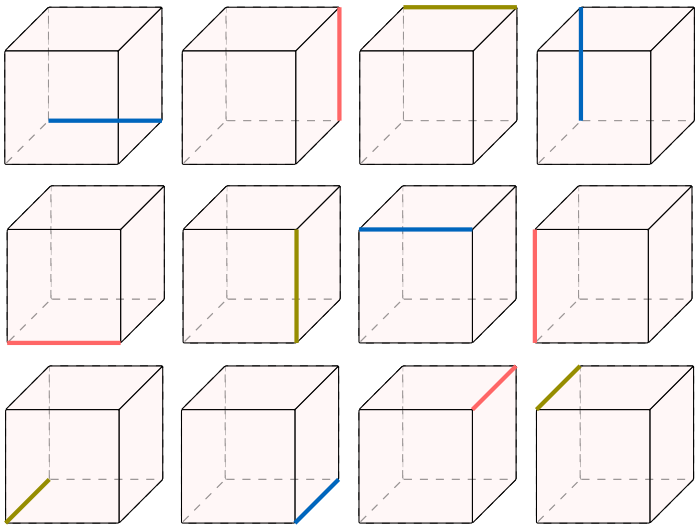
A.3 COUNTING EDGES

Ex 11: How many edges does this cube have?



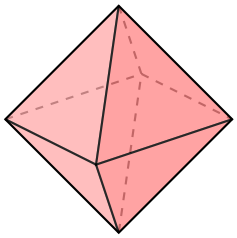
12 edges

Answer: Count each line where two faces meet to find the number of edges.



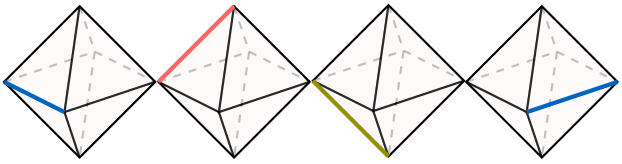
There are **12 edges**.

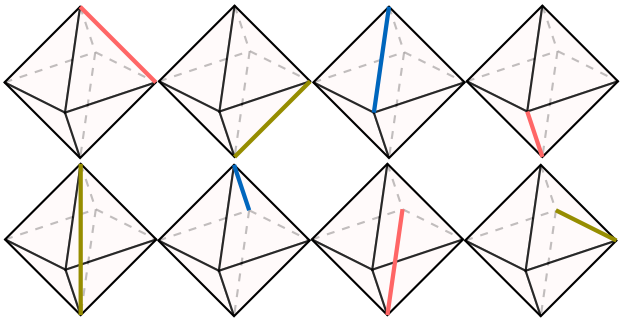
Ex 12: How many edges does this eight-faced die have?



12 edges

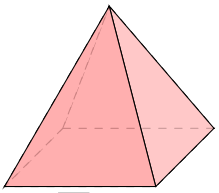
Answer: Count each line where two faces meet to find the number of edges.





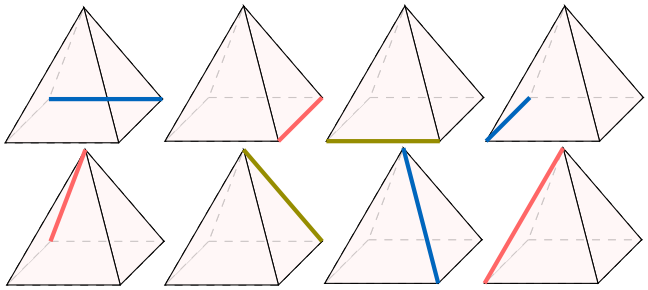
There are **12 edges**.

Ex 13: How many edges does this square Pyramid have?



5 edges

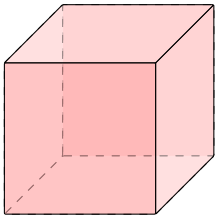
Answer: Count each line where two faces meet to find the number of edges.



There are **8 edges**.

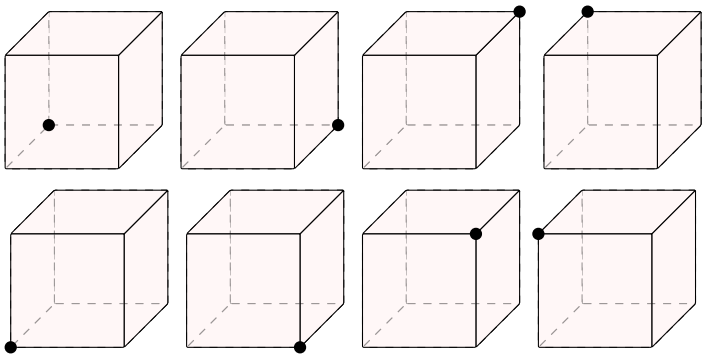
A.4 COUNTING VERTICES

Ex 14: How many vertices does this cube have?



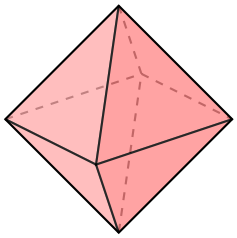
8 vertices

Answer: Count each corner where the lines meet to find the number of vertices.



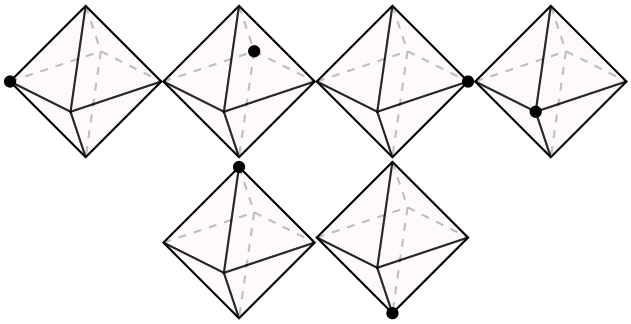
There are **8 vertices**.

Ex 15: How many vertices does this eight-faced die have?



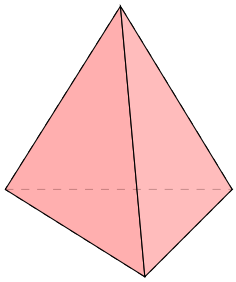
6 vertices

Answer: Count each corner where the lines meet to find the number of vertices.



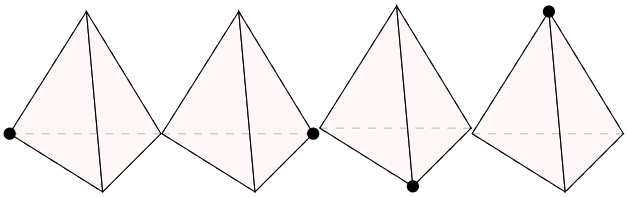
There are **6 vertices**.

Ex 16: How many vertices does this triangular pyramid have?



4 vertices

Answer: Count each corner where the lines meet to find the number of vertices.

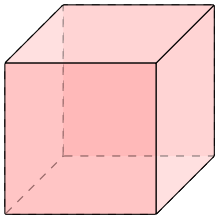


There are **4 vertices**.

B DRAWING THREE-DIMENSIONAL SHAPES

B.1 COUNTING VISIBLE AND HIDDEN EDGES

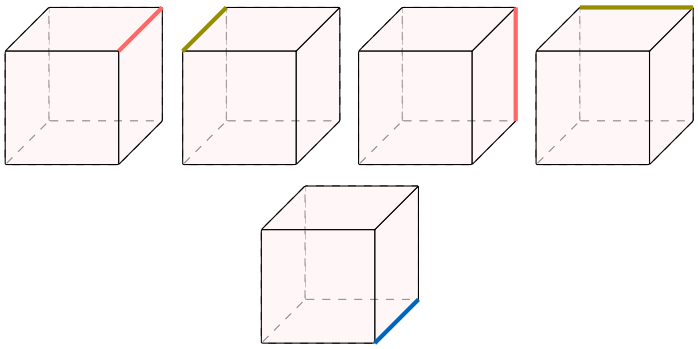
Ex 17: Count the number of visible and hidden edges on this cube



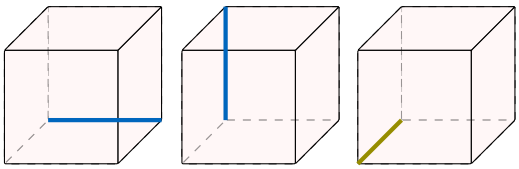
9 visible edges
3 hidden edges

Answer:

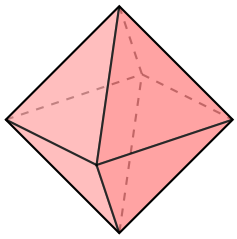
- 9 visible edges:



- 3 hidden edges:



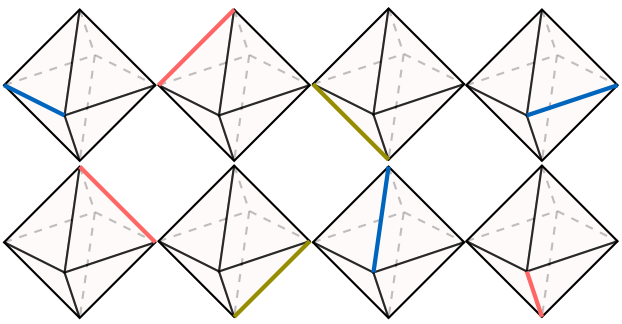
Ex 18: Count the number of visible and hidden edges on this eight-faced die.



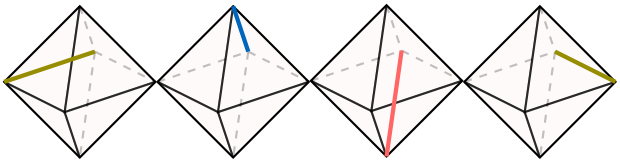
8 visible edges
4 hidden edges

Answer:

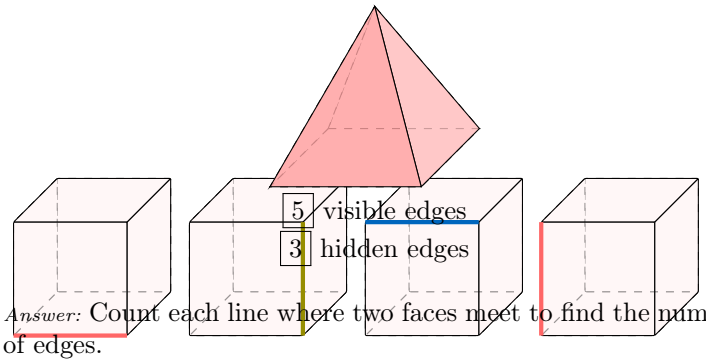
- 8 visible edges



- 4 hidden edges

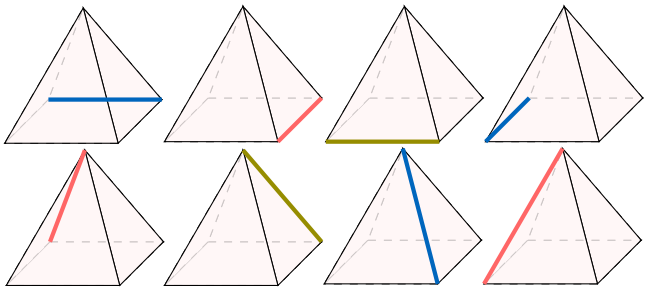


Ex 19: Count the number of visible and hidden edges on this square Pyramid.



5 visible edges
3 hidden edges

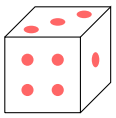
Answer: Count each line where two faces meet to find the number of edges.



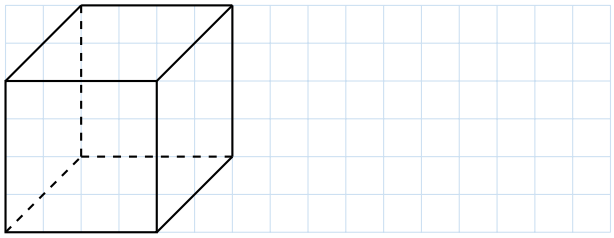
There are **8 edges**.

B.2 DRAWING THREE-DIMENSIONAL SHAPES

Ex 20:

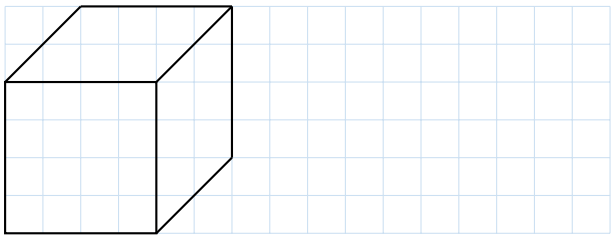


Draw this cube on your graph paper.

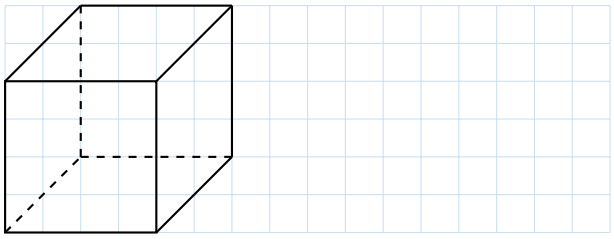


Answer:

1. Draw the visible edges with solid lines:

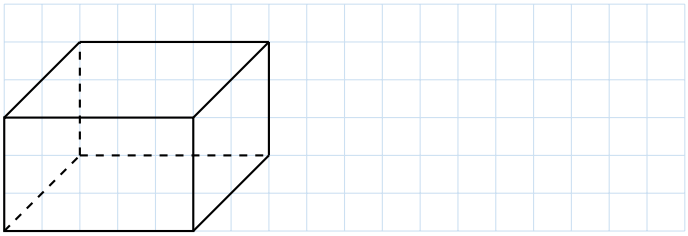


2. Draw the hidden edges with dotted lines:



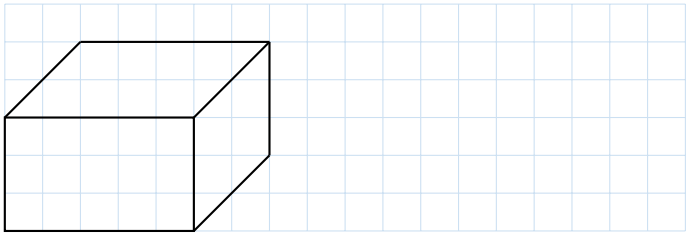
Ex 21:

Draw this cube on your graph paper.

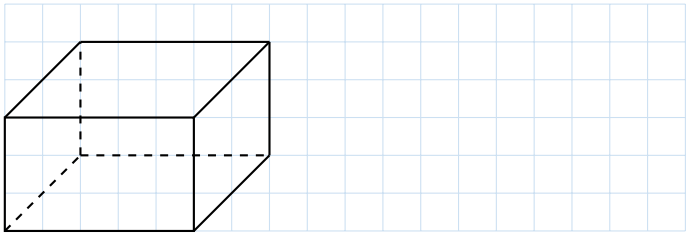


Answer:

1. Draw the visible edges with solid lines:

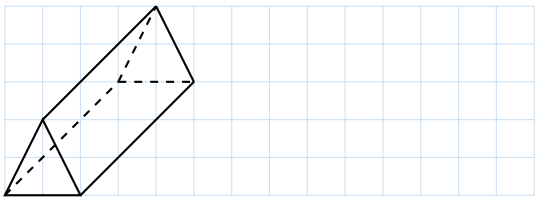


2. Draw the hidden edges with dotted lines:



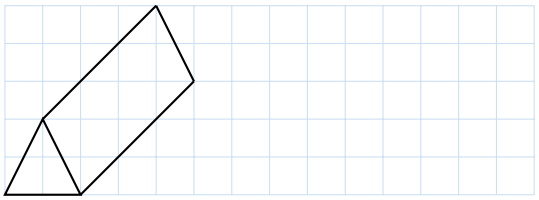
Ex 22:

Draw this triangular prism on your graph paper.

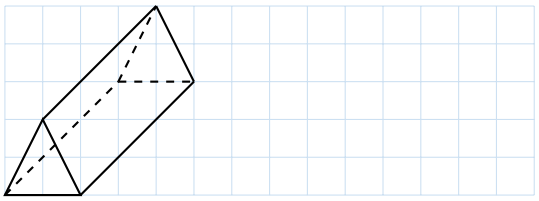


Answer:

1. Draw the visible edges with solid lines:

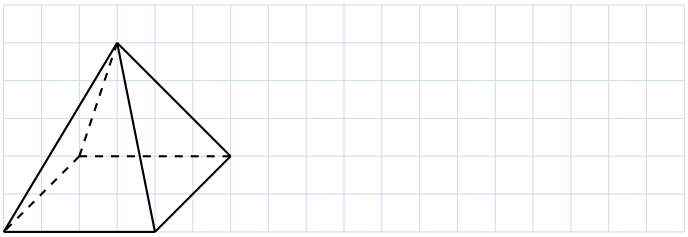


2. Draw the hidden edges with dotted lines:



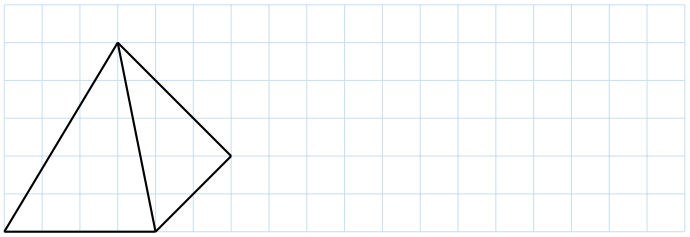
Ex 23:

Draw this pyramid on your graph paper.

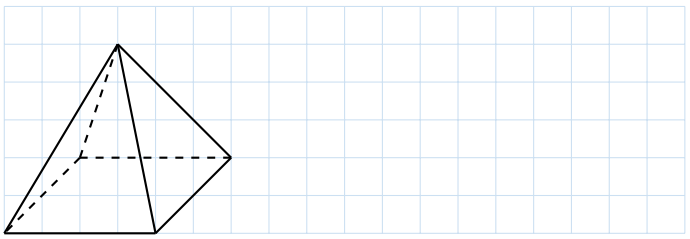


Answer:

1. Draw the visible edges with solid lines:



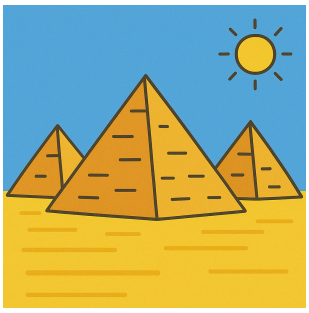
2. Draw the hidden edges with dotted lines:



C CLASSIFICATION

C.1 FINDING THE SHAPES

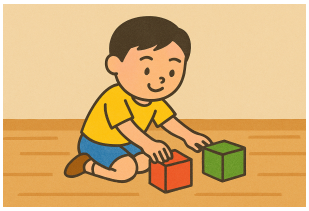
Ex 24: Can you find all the pyramids in the picture?



[3] pyramids

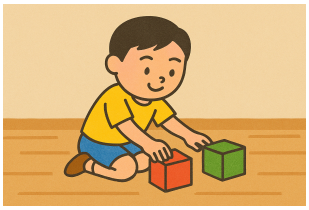
Answer: The picture shows 3 pyramids.

Ex 25: Can you find all the cubes in the picture?



[2] cubes

Answer: A cube is a 3D shape with six equal square faces. Count each cube in the picture. The picture shows boys playing with two cubes. There are **2 cubes**.



Ex 26: Can you find all the spheres in the picture?

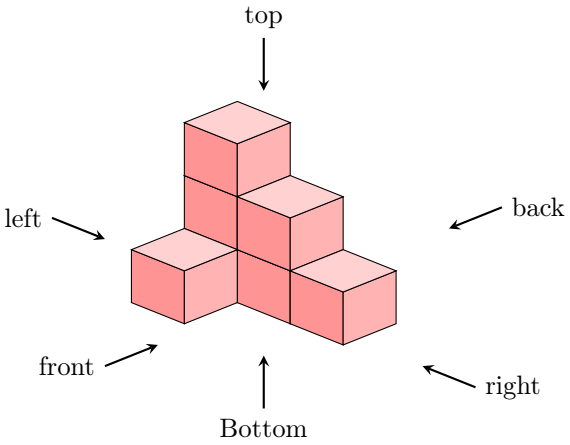
[3] spheres

Answer: A sphere is a round 3D shape, like a marble. Count each sphere in the picture. The picture shows a girl playing with 3 marbles, which are 3 spheres. There are **3 spheres**.

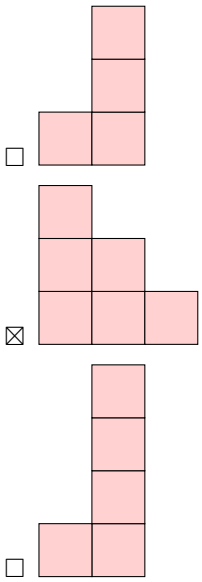
D MULTI-VIEW PROJECTION

D.1 FINDING THE PROJECTION

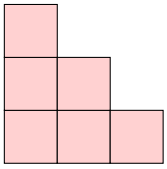
MCQ 27: Identify the front view of this solid.



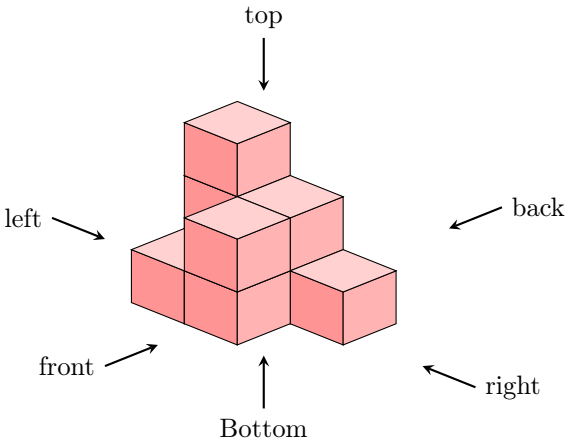
Choose one answer:



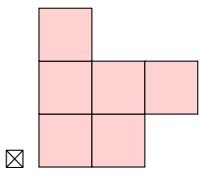
Answer: The correct front view is the second option:

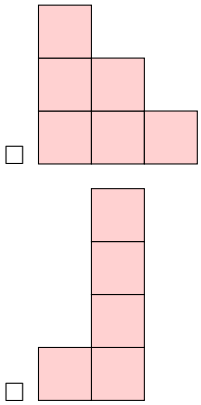


MCQ 28: Identify the top view of this solid.

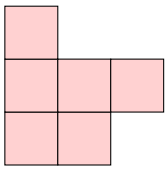


Choose one answer:

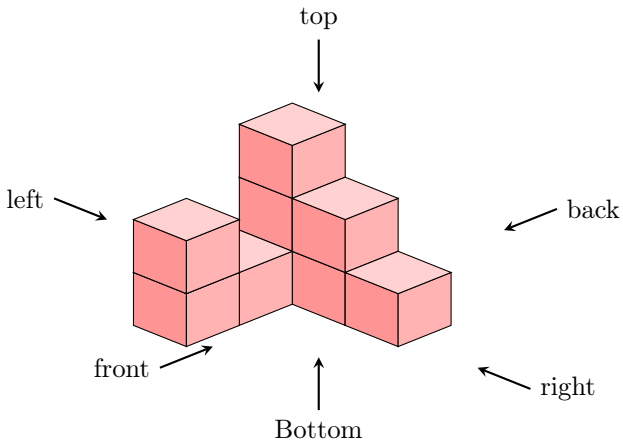




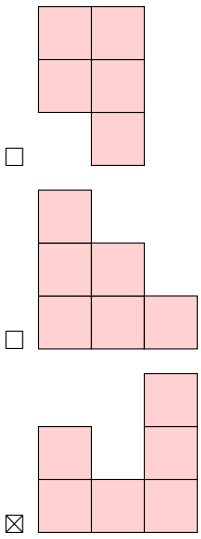
Answer: The correct top view is the first option:



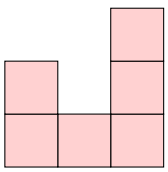
MCQ 29: Identify the right view of this solid.



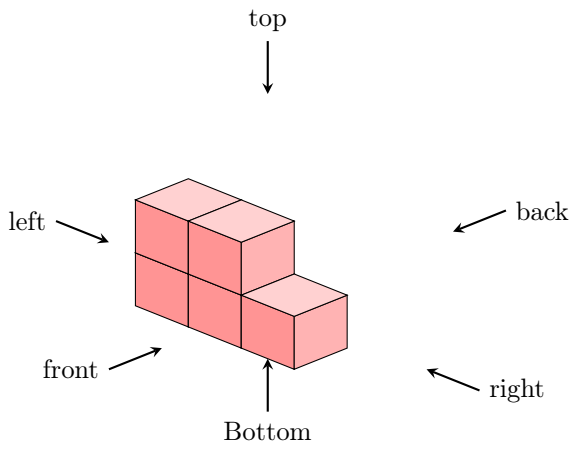
Choose one answer:



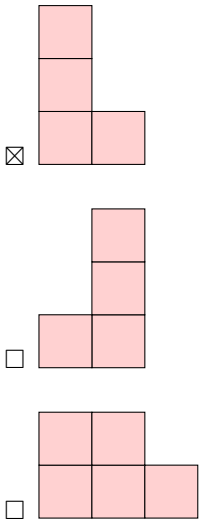
Answer: The correct right view is the third option:



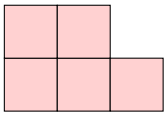
MCQ 30: Identify the front view of this solid.



Choose one answer:

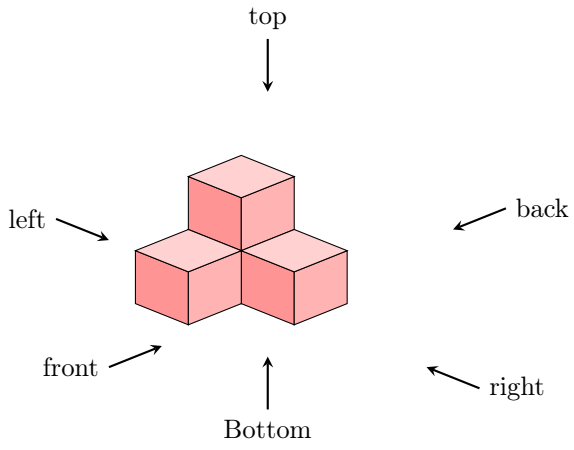


Answer: The correct front view is the third option:

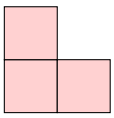


D.2 DRAWING THE PROJECTION

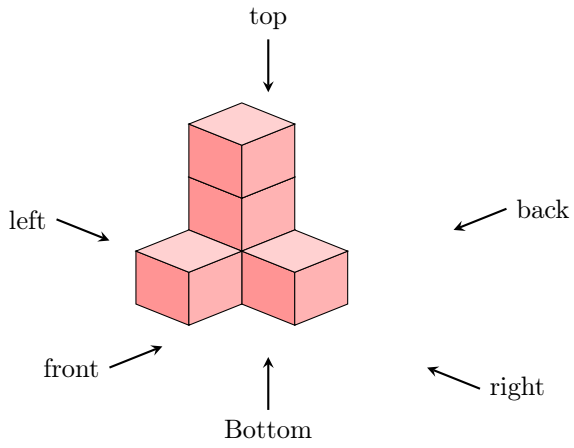
Ex 31: Draw the front view of this solid on your graph paper.



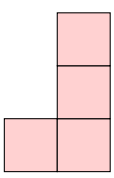
Answer: The front view is:



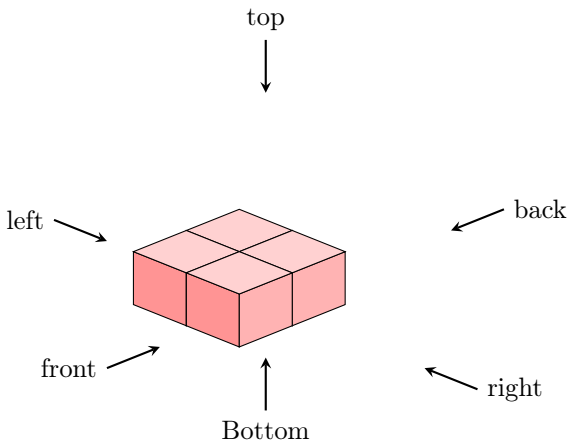
Ex 32: Draw the right view of this solid on your graph paper.



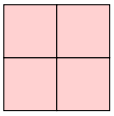
Answer: The right view is:



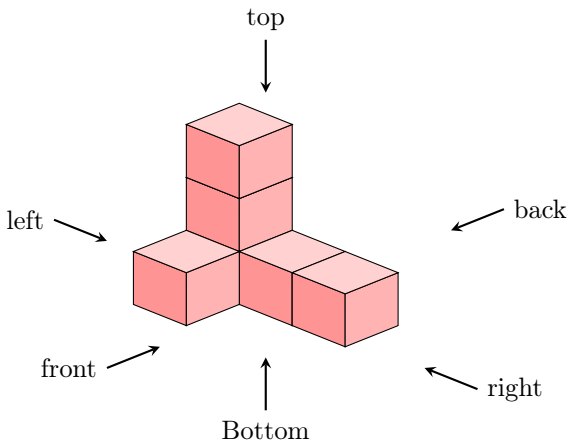
Ex 33: Draw the top view of this solid on your graph paper.



Answer: The top view is:



Ex 34: Draw the front view of this solid on your graph paper.



Answer: The front view is: