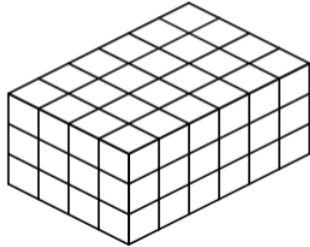# VOLUME — ADDING AN EXTRA LAYER

Name _____

For each figure below, we want to add one more layer on top. Use the models and answer each question to determine the volume if one extra layer is added on top. Each cube is one cubic centimeter.
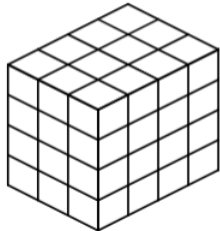
1.

Each layer contains _____ cubes.

We have _____ layers now, so the volume is _____ cubic cm.

Adding one more layer would make the new volume _____ cubic centimeters.

2.
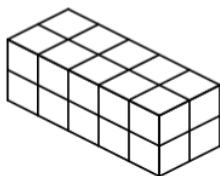
Each layer contains _____ cubes.

We have _____ layers now, so the volume is _____ cubic cm.

Adding one more layer would make the new volume _____ cubic centimeters.

3.

Each layer contains _____ cubes.

We have _____ layers now, so the volume is _____ cubic cm.

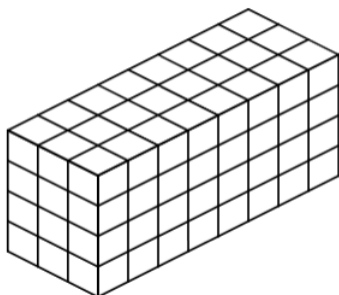Adding one more layer would make the new volume _____ cubic centimeters.

4.

Each layer contains _____ cubes.

We have _____ layers now, so the volume is _____ cubic cm.

Adding one more layer would make the new volume _____ cubic centimeters.

5.
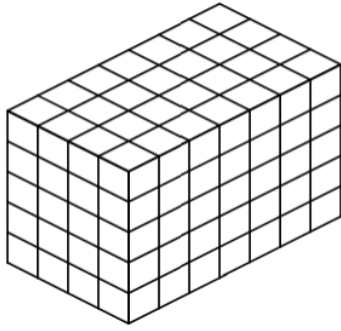
Each layer contains _____ cubes.

We have _____ layers now, so the volume is _____ cubic cm.

Adding one more layer would make the new volume _____ cubic centimeters.

6.

Each layer contains _____ cubes.

We have _____ layers now, so the volume is _____ cubic cm.

Adding one more layer would make the new volume _____ cubic centimeters.

7.
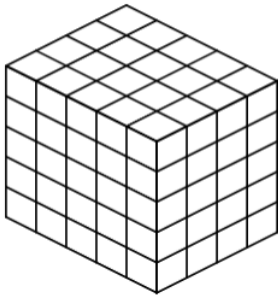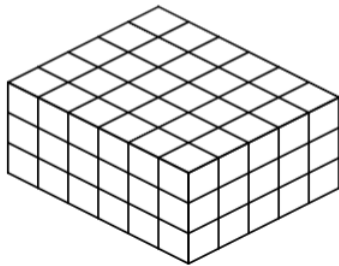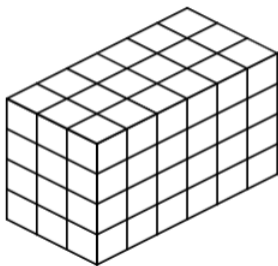
Each layer contains _____ cubes.

We have _____ layers now, so the volume is _____ cubic cm.

Adding one more layer would make the new volume _____ cubic centimeters.

8.

Each layer contains _____ cubes.

We have _____ layers now, so the volume is _____ cubic cm.
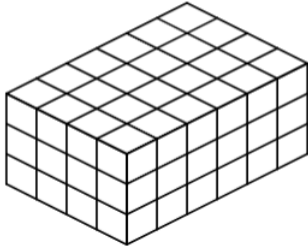
Adding one more layer would make the new volume _____ cubic centimeters.

VOLUME — ADDING AN EXTRA LAYER

Name KEY

For each figure below, we want to add one more layer on top. Use the models and answer each question to determine the volume if one extra layer is added on top. Each cube is one cubic centimeter.
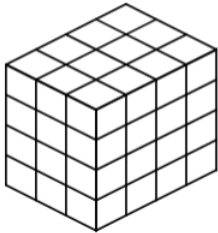
1.

Each layer contains   24   cubes.

We have   3   layers now, so the volume is   72   cubic cm.

Adding one more layer would make the new volume   96   cubic centimeters.

2..

Each layer contains   12   cubes.

We have   4   layers now, so the volume is   48   cubic cm.

Adding one more layer would make the new volume   60   cubic centimeters.

3.

Each layer contains   10   cubes.

We have   2   layers now, so the volume is   20   cubic cm.

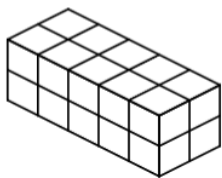Adding one more layer would make the new volume   30   cubic centimeters.

4.

Each layer contains   24   cubes.

We have   4   layers now, so the volume is   96   cubic cm.

Adding one more layer would make the new volume   120   cubic centimeters.

5.

Each layer contains   28   cubes.

We have   5   layers now, so the volume is   140   cubic cm.

Adding one more layer would make the new volume   168   cubic centimeters.

6.
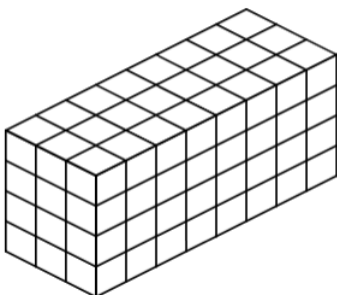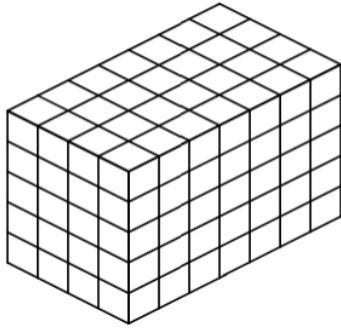
Each layer contains   20   cubes.

We have   5   layers now, so the volume is   100   cubic cm.

Adding one more layer would make the new volume   120   cubic centimeters.

7.

Each layer contains   30   cubes.

We have   3   layers now, so the volume is   90   cubic cm.

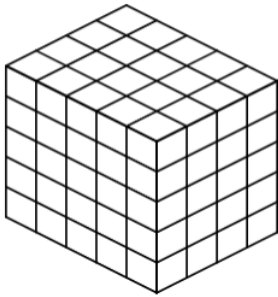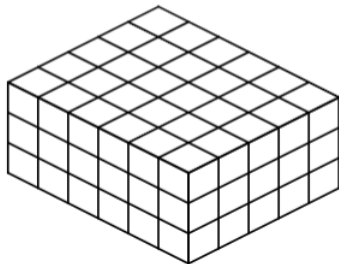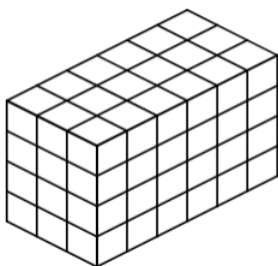Adding one more layer would make the new volume   120   cubic centimeters.

8.

Each layer contains   18   cubes.

We have   4   layers now, so the volume is   72   cubic cm.

Adding one more layer would make the new volume   90   cubic centimeters.
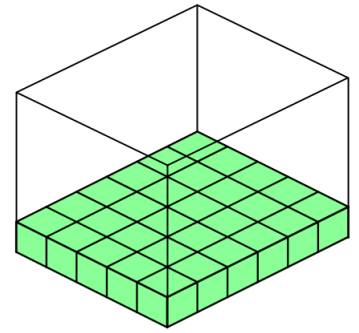
VOLUME – HOW MANY LAYERS?

Name _____

1. Julianne packed 1-centimeter cubes into this box with a volume of 150 cubic centimeters.

   How many layers of 1-centimeter cubes did Julianne pack?

   The first layer contains _____ cubes.

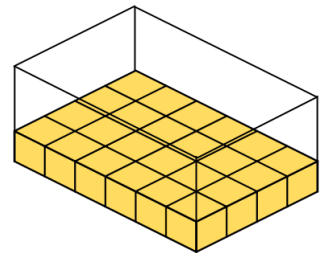   It would take _____ layers like this to equal 150 cubes.

2. Eason packed 1-centimeter cubes into this box with a volume of 72 cubic centimeters.

   How many layers of 1-centimeter cubes did Eason pack?

   The first layer contains _____ cubes.

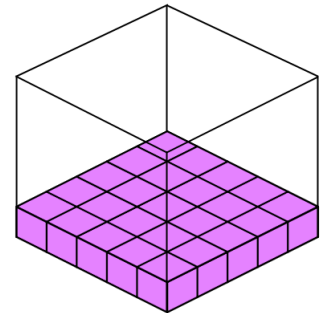   It would take _____ layers like this to equal 72 cubes.

3. Lisa packed 1-centimeter cubes into this box with a volume of 125 cubic centimeters.

   How many layers of 1-centimeter cubes did Lisa pack?

   The first layer contains _____ cubes.

   It would take _____ layers like this to equal 125 cubes.
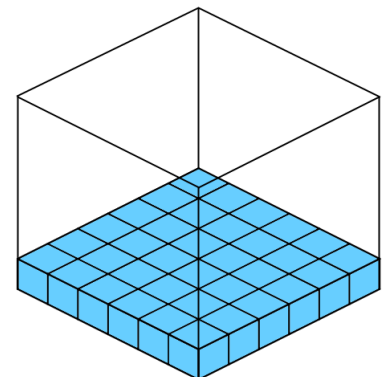

4. Meadow packed 1-centimeter cubes into this box with a volume of 216 cubic centimeters.

   How many layers of 1-centimeter cubes did Meadow pack?

   The first layer contains _____ cubes.

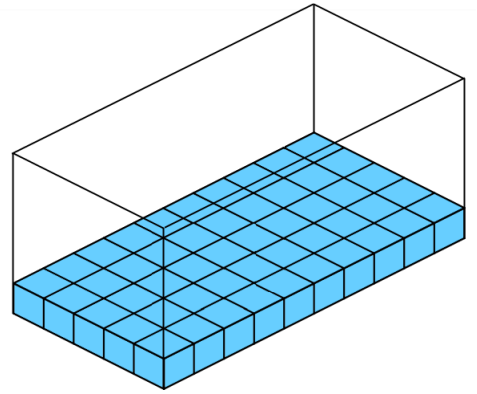   It would take _____ layers like this to equal 216 cubes.

5. Braylon packed 1-centimeter cubes into this box with a volume of 250 cubic centimeters.

   How many layers of 1-centimeter cubes did Braylon pack?

   The first layer contains _____ cubes.

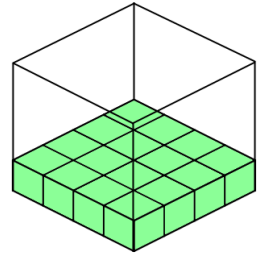   It would take _____ layers like this to equal 250 cubes.

6. Aliyah packed 1-centimeter cubes into this box with a volume of 64 cubic centimeters. How many layers of 1-centimeter cubes did Aliyah pack?

   The first layer contains _____ cubes.

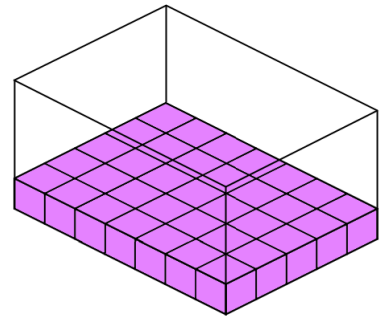   It would take _____ layers like this to equal 64 cubes.

7. Roberta packed 1-centimeter cubes into this box with a volume of 140 cubic centimeters. How many layers of 1-centimeter cubes did Roberta pack?

   The first layer contains _____ cubes.

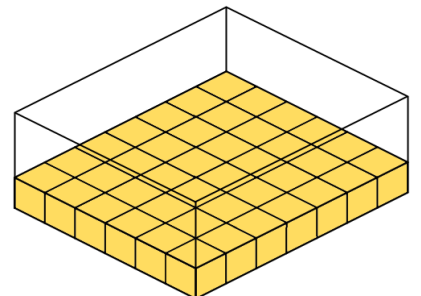   It would take _____ layers like this to equal 140 cubes.

8. Terrence packed 1-centimeter cubes into this box with a volume of 126 cubic centimeters. How many layers of 1-centimeter cubes did Terrence pack?

   The first layer contains _____ cubes.

   It would take _____ layers like this to equal 126 cubes.
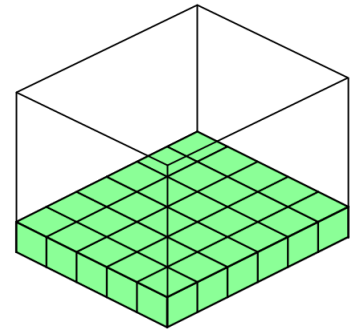
VOLUME – HOW MANY LAYERS?

Name **KEY**

1. Julianne packed 1-centimeter cubes into this box with a volume of 150 cubic centimeters.

   How many layers of 1-centimeter cubes did Julianne pack?

   The first layer contains **30** cubes.

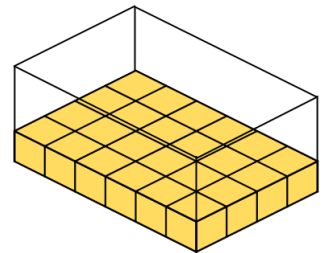   It would take **5** layers like this to equal 150 cubes.

2. Eason packed 1-centimeter cubes into this box with a volume of 72 cubic centimeters.

   How many layers of 1-centimeter cubes did Eason pack?

   The first layer contains **24** cubes.

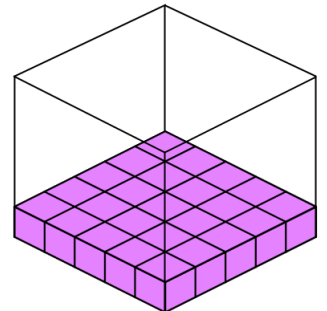   It would take **3** layers like this to equal 72 cubes.

3. Lisa packed 1-centimeter cubes into this box with a volume of 125 cubic centimeters.

   How many layers of 1-centimeter cubes did Lisa pack?

   The first layer contains **25** cubes.

   It would take **5** layers like this to equal 125 cubes.
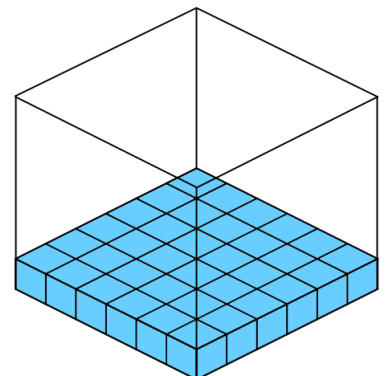
4. Meadow packed 1-centimeter cubes into this box with a volume of 216 cubic centimeters.

   How many layers of 1-centimeter cubes did Meadow pack?

   The first layer contains **36** cubes.

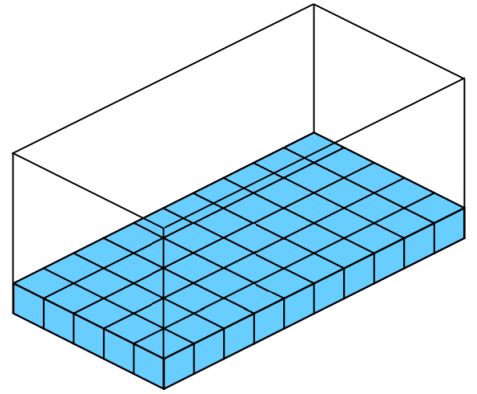   It would take **6** layers like this to equal 216 cubes.

5. Braylon packed 1-centimeter cubes into this box with a volume of 250 cubic centimeters.

   How many layers of 1-centimeter cubes did Braylon pack?

   The first layer contains   **50**   cubes.

   It would take   **5**   layers like this to equal 250 cubes.
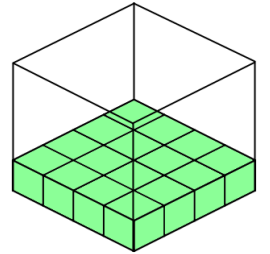
6. Aliyah packed 1-centimeter cubes into this box with a volume of 64 cubic centimeters.
   How many layers of 1-centimeter cubes did Aliyah pack?

   The first layer contains   **16**   cubes.

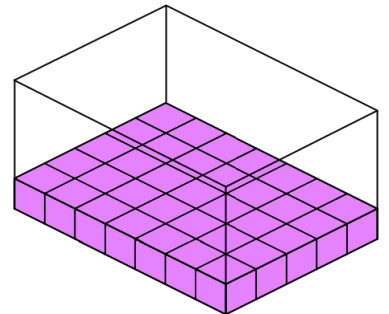   It would take   **4**   layers like this to equal 64 cubes.

7. Roberta packed 1-centimeter cubes into this box with a volume of 140 cubic centimeters.
   How many layers of 1-centimeter cubes did Roberta pack?

   The first layer contains   **35**   cubes.

   It would take   **4**   layers like this to equal 140 cubes.

8. Terrence packed 1-centimeter cubes into this box with a volume of 126 cubic centimeters.
   How many layers of 1-centimeter cubes did Terrence pack?

   The first layer contains   **42**   cubes.

   It would take   **3**   layers like this to equal 126 cubes.