

Huge Diamond found in Canada



552 carat diamond found in October 2018 at the Diavik Diamond Mine, Canada

Recently, a huge yellow diamond was found in a remote area of Canada. The Diavik mine is about 210 km (140 mi) south of the Arctic Circle and 300 kilometers (186 mi) northeast of Yellowknife, the capital city of Canada's Northwest Territories.

Check out the Diavik mine movie at YummyMath.com and come to class ready to share your observations.

The uncut stone weighed 552-carats.

I have no clue how big this diamond must be. I think that the picture above should have had something next to the diamond so that I could better understand its relative size.

1. What do you think would have been a good comparison in the diamond's picture to help you appreciate its size ... an automobile, a grocery basket, a dime or what?



I found another famous diamond to use for comparison. In 1969 the actor, Richard Burton bought a 68-carat diamond for his wife, Elizabeth Taylor. The 68-carat diamond is the tear-shaped stone at the base of the necklace shown at the right.

2. Does this picture help you understand how big the new Canadian diamond must be? Please explain.



Actually we found that the newly discovered stone is egg shaped with an approximate diameter of 33.74 mm a length of 54.56 mm.

The cut Taylor/Burton diamond is tear-shaped and has these dimensions: 36.3 x 25.0 x 25.4 mm.

3. Now can you imagine the 552-carat size?
4. On a blank sheet of paper make an outline drawing of your hand and then measure the two stone dimensions on your finger image to show what the rock might look like on your hand.
Or
On 3-d graph paper that we have supplied at the site, draw both the Taylor/Burton diamond and the new Canadian diamond using the same units on both graphs.

Of course the Canadian diamond still has to be polished and shaped. The Vice President of Dominion Mines thinks that its shape lends itself to being cut as a lovely yellow oval shaped diamond with the weight of perhaps 150 carats.

5. How much of the original stone would probably be lost in its cutting and shaping?
 - a. In carats?
 - b. In percent?

The Burton-Taylor diamond weighted 68-carats. It was cut from a stone that weighed 241 carats.

6. How much of its original weight was lost in its cutting and shaping?
 - a. In carats?
 - b. In percent?
7. Is the loss of material in the cutting of these two stones similar? Please explain.
8. What factors do you think contribute to the material lost in finishing the stones?

The Burton-Taylor diamond is valued today at 18.9 million US dollars.

9. In this case, what is the value of one carat of this diamond?



Another famous diamond is the Hope Diamond. This antique blue diamond is believed to have been found in India in the 17th century.

Before being cut it is estimated that it weighed between 112 and 115 carats. Its cut weight is 45.52 carats and it is insured today for 250 million US dollars (even though it is considered irreplaceable).

10. How does the percent lost in cutting and shaping the Hope diamond compare to the Burton-Taylor stone?

11. How does the value per carat of the Hope diamond compare to the Burton-Taylor diamond?

We thought one more interesting diamond would help us appreciate the size of the new Canadian diamond. The second largest gem ever found was discovered in Botswana. The Lesedi La Rona diamond. (Name means "our light" in Setswana, the national language of Botswana, was found in 2015. It weighed 1,111 carats and hasn't been cut or valued yet. This image of this stone, being held in a woman's hands, helps me better understand its size.

12. What do you guess its weight and value will be when it is finally cut?



Sources: <https://www.worthy.com/famous-diamonds/the-taylor-burton-diamond>
<https://www.worthy.com/famous-diamonds/the-hope-diamond>
https://www.washingtonpost.com/news/morning-mix/wp/2015/11/20/1111-carat-diamond-discovered-in-botswana-mine/?utm_term=.b210e089c623
<https://agoracom.com/ir/Cantex/forums/off-topic/topics/297788-mining-for-diamonds-in-the-canadian-rough/messages/1029411>