

Diamonds

Some of the earliest diamonds known came from India. In the eighteenth century they were found in Brazil, and in 1866, huge deposits were found near Kimberley in South Africa. Though evidence of extensive diamond deposits has recently been found in Siberia, the continent of Africa still produces nearly all the world's supply of these stones.

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The most valuable diamonds are large, individual crystals of pure crystalline carbon. Less perfect forms, known as 'boart' and 'carbonado' are clusters of tiny crystals. Until diamonds are cut and polished, they do not sparkle like those you see on a ring – they just look like small, blue-grey stones.

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In a rather crude form, the cutting and polishing of precious stones was an art known to the Ancient Egyptians, and in the Middle Ages it became widespread in north-west Europe. However, a revolutionary change in the methods of cutting and polishing was made in 1476 when Ludwig Van Berquen of Bruges in Belgium invented the use of a swiftly revolving wheel with its edge faced with fine diamond powder. The name 'boart' is given to this fine powder as well as the natural crystalline material already mentioned. It is also given to badly flawed or broken diamond crystals, useless as jewels, that are broken into powder for grinding purposes, the so-called 'industrial' diamonds.

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Diamond itself is the only material hard enough to cut and polish diamonds – though recently, high-intensity light beams called lasers have been developed which can bore holes in them. It may be necessary to split or cleave the large stones before they are cut and polished. Every diamond has a natural line of cleavage, along which it may be split by a sharp blow with a cutting edge.

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A fully cut 'brilliant' diamond has 58 facets, or faces, regularly arranged. For cutting or faceting, the stones are fixed into copper holders and held against a wheel, edged with a mixture of oil and fine diamond dust, which is revolved at about 2,500 revolutions a minute. Amsterdam and Antwerp, in Holland and Belgium respectively, have been the centre of the diamond cutting and polishing industry for over seven centuries.

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The jewel value of brilliant diamonds depends greatly on their colour, or 'water' as it is called. The usual colours of diamonds are white, yellow, brown, green, or blue-white; the blue-white brilliants are the stones of the 'finest water' and so command the highest prices. During their formation, some diamonds absorb metallic oxides from the surrounding rocks and take on their colour. Thus black, red and even bright pink diamonds have occasionally been found.

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The trade in diamonds is not only in the valuable gem stones but also in the industrial diamonds mentioned above. Zaire produces 70% of such stones. They are fixed into the rock drills used in mining and civil engineering, also for edging band saws for cutting stone. Diamond-faced tools are used for cutting and drilling glass and fine porcelain, and for dentists' drills. They are used as bearings in watches and other finely balanced instruments. Perhaps you own some diamonds without knowing it - in your wristwatch!

Ideas

Select the answer which is most accurate according to the information given in the passage.

- 1 Since 1866
 - a) most of the world's diamonds have come from Siberia.
 - b) all the world's diamonds have come from near Kimberley in South Africa.
 - c) Africa has produced nearly all the world's diamonds.
 - d) diamonds have been discovered in most parts of the world.
- 2 'Carbonado' is the name given to
 - a) only the very best diamonds.
 - b) lumps of pure carbon.
 - c) Spanish diamonds.
 - d) diamonds made up of many small crystals.
- 3 After a diamond has been cut and polished, it
 - a) looks like a small blue pebble.
 - b) looks very different from its original form.
 - c) can no longer be used to put in a ring.
 - d) changes its chemical composition.
- 4 The art of cutting and polishing precious stones remained crude until
 - a) the fourteenth century.
 - b) the fifteenth century.
 - c) the sixteenth century.
 - d) the seventeenth century.
- 5 Industrial diamonds are
 - a) made of a different substance from real diamonds.
 - b) not as sparkling or brilliant as 'boart'.
 - c) made up of diamond dust and broken crystals.
 - d) produced artificially in factories.
- 6 During faceting, diamonds are held in copper holders
 - a) to facilitate accurate cutting.
 - b) to make them shine more brilliantly.
 - c) so that they can revolve more easily.
 - d) as a steel holder might damage the diamond.

7 The value order of 'water' in diamonds

- a) is more important than their colour.
- b) ranges from blue-white upwards.
- c) ranges from blue-white downwards.
- d) has never been reliably established.

8 Diamonds are

- a) white, yellow, brown, green or blue-white.
- b) all the same colour.
- c) either blue or white in colour.
- d) different colours depending on which rocks they come from.

9 Zaire produces

- a) 70% of all diamonds sold.
- b) 70% of industrial diamonds sold.
- c) 70% of all precious stones sold.
- d) 70% of the world's blue-white diamonds.

10 Industrial diamonds are used

- a) for a wide range of purposes.
- b) mainly for dentists' drills.
- c) for decoration in rings and watches.
- d) principally in mass-produced jewellery.

Vocabulary

Find the following words in the passage and select the meaning you think is *most likely* to correspond among the choices given.

1 *crude* (line 11)

- a) ill-mannered
- b) uncultured
- c) simple
- d) uneducated

4 *lasers* (line 22)

- a) saws
- b) energy beams
- c) polishing machines
- d) light planks of wood

2 *faced* (line 16)

- a) opposed
- b) surfaced
- c) confronted
- d) decorated

5 *cleave* (line 24)

- a) move
- b) clip together
- c) break
- d) cut with sharp knife

3 *flawed* (line 18)

- a) imperfectly formed
- b) liquid
- c) badly finished
- d) dropped to the ground

6 *faceting* (line 28)

- a) surface polishing
- b) mounting
- c) splitting
- d) setting in rings

7 *command* (line 36)

- a) order
- b) bring
- c) tell
- d) instruct

8 *take on* (line 38)

- a) adopt
- b) continue
- c) agree to do
- d) fight

9 *fine* (line 44)

- a) high quality
- b) soft
- c) sunny
- d) payment

10 *bearings* (line 45)

- a) directions
- b) decorations
- c) mechanical supports
- d) straps

Missing word summary

Fill in the numbered blanks from the selection of words given below. The correct choices will complete the sense of this summary of the reading passage.

[1] diamonds have been found in India, Brazil and Siberia, most of them come from the African continent. Single large crystals of pure crystalline carbon are the most [2] kind, although they do not sparkle [3] they are cut and polished. The art of cutting and polishing diamonds has been known [4] the time of the Ancient Egyptians, but it was not until 1476, [5] the invention of Ludwig Van Berquen's [6] that the modern art of precision polishing developed. The colour or 'water' of a diamond [7] its value, though flawed diamonds are widely used in [8], as well as in delicate instruments such as watches.

- 1
- a) Because
 - b) However
 - c) Although

- 5
- a) before
 - b) with
 - c) to

- 2
- a) common
 - b) valuable
 - c) colourful

- 6
- a) diamond dust
 - b) polishing wheel
 - c) 'boart' crystal

- 3
- a) until
 - b) after
 - c) although

- 7
- a) decides
 - b) reduces
 - c) increases

- 4
- a) before
 - b) since
 - c) along with

- 8
- a) industry
 - b) jewellery
 - c) Zaire