I'm not a robot

Natural selection and evolution are largely accepted by the scientific community. But until the 1800s, researchers knew nothing of natural selection.What they were aware of, though, were two other concepts that describe evolution.These are:Descent with modificationCommon descent.The first is an observable fact. Children look different from their parents and siblings. Despite being descendants of their parents, children are modified versions of them.The common descent theory suggests that living beings on Earth all share a common ancestor. Descent with modification over numerous years has resulted in all the species variety we see. But, its also a theory we cant observe. Over the years, scientists have described a model common descent. However, at the time, researchers could not fathom how random genetic changes could guide descent with modification to create species variety from a single ancestor.Charles Darwins theory of natural selection changed all of that. He suggested that while random variations may have been wrought by nature, nature had also helped select organisms that were most likely to survive. Over time, organisms that do well, flourish, as do their offspring. Eventually, enough of the offspring with useful characteristics survive and alter the species as a whole.Darwins belief in natural selection being an essential step for evolution has been proven, to some degree. Researchers have observed it in the lab and outside, making natural selection an observable fact. Common descent is a bit harder to prove. How wasNaturalSelectionDiscovered?In 1859, Darwin laid the foundation for the field of evolution when he put forward his theory of natural selection. His travels to South America and Europe aboard theH.M.S. Beaglehad brought the variety of the natural world into his line of vision.He theorized that differences in needs and responses to ones environment led to certain traits being favored over others. This ability to adapt to ones surroundings made one more or less likely to survive. Naturally, during reproduction, organisms with those traits outperformed those without. Gradually, such organisms flourished and evolved. HowDoesNaturalSelectionWork?According to Darwin, the adaptation of organisms to their environs happened throughnatural selection. This process arises from a random accumulation of favorable genes. The fittest individuals were those who possessed the genes needed to survive their environment.The theory of natural selection was the crux of Darwins proclamations during the 19th century. Simply put, genes that increase an organisms chances of survival are more likely to appear in a population. Eventually, genes that reduce fitness are ruled out.A well-known example is that of the evolution of dark moths in England. Prior to the industrial revolution, a light grey moth, which was easily camouflaged between the lichen growing on trees was the most common variety in the country. But after theindustrialization of the nation, pollution turned the barks of trees black, making darker moths more likely to survive scavenging birds.Over time,natural selectionmade black moths a more common feature in cities as opposed to the rural areas that still bear witness to the lighter variants. Thus, environmental constraints had weeded out the weaker moths. Fitter moths that could withstand predation eventually overtook the natural population. Natural selection vs artificial selectionWhile natural selection occurs well, naturally, artificial selection requires a helping handmost often from man. The domestication of the dogs we have as pets and the crops we like to eat are a direct result of mans interference in evolution. Humans have selectively bred many species useful to them by choosing to breed only those with traits we valued.Horses have been bred for speed, cows for milk production, and dogs for size, cuteness or ferocity. Artificial selection has not interfered with nature in multiple ways. For example, the wild mustard of yore is the ancestor of not only the cabbage of today but also that ofbrusselsprouts, kale, cauliflower, and kohlrabi. 3Requirements forNaturalSelectionFor natural selection to occur, certain requirements need to be met:Organisms within a species can differ from one to the other. These variations can include color, size, markings, etc. But other traits, say the number of chambers in a humans heart, will remain constant within the species.Certain traits are heritable and passed from parent to offspring.Populations tend to overproduce but are kept in check by disease, famine, or other limitations. Individuals within a species must compete for resources.Variations that help organisms adapt to their environs are retained andherited. Thus, over time, populations evolve through natural selection. Only those individuals who can adapt to their environment pass on suitable traits to their progeny and survive. Natural selection in humansThe mechanisms of natural selection are well observed, however explaining human origins gets more complex.Historically,it was thoughtmodern humans evolved to beat out other species. Researcherslongsuspectedthat one reason humans may have vanquished Neanderthals is because we were more adaptable.However Neanderthal DNA in modern human genes show thats not exactly the case.Humans have colonized the far corners of the world. These varying environments have left their mark on the human genome in the form of adaptations. Till date, close to 3000 regions associated with natural selectionbeingidentified in the human genome. These include changes in the genes that help people digest milk or acclimate to high altitudes.One example of natural selection in humans is the skin tone gradient seen across the world. To begin with, humans were likely pale under thick fur. As we lost most of our body hairlikely to keep us cool in hot Africawe grew darker-skinned.Today we can explain these changes via epigenetics. A genes ability to shift its expression with environmental changes. It adds a level of complexity to random mutations.Melanin, the pigment in our skin kept us protected from the suns UV rays. Dark skin in the tropics help prevent the breakdown of folate, an important vitamin.As humans spread out of Africa, lighter skin evolved in regions of the world where sunlight is not as harsh. Light skin in the temperate zone helps in vitamin D storage.Another example is human tolerance of lactose, the sugar in milk. When domestication had not made milk easily accessible to humans, lactose intolerance was widespread. Now, large scale dairy farming has almost led to the disappearance of this trait. ConclusionNatural selectionin evolution is anobserved phenomena. However, new advances in biological diversity and genetics, show there are still many things to learn to explain the evolution of a complex species like the human race.Today you can still detect the vestige of these legacies in our genome.When we consider evolution an explanation for all life on earth, it must beacknowlegedthat part of the theory is still being uncovered by scientists. Further reading: //www.amazon.com/Life-Science-William-K-Purves/dp/0716798565 //www.amazon.com/Biology-8th-Neil-Campbell/dp/0805368442 //blogs.discovermagazine.com/crux/2019/01/28/human-skin-color-explained-vitamind-folate/#.XGLipTMza00 Transcribed image text: SELECTION - NATURAL SELECTION IN INSECTS Lab Data Environment: Clean Forest Moths Released G G G3 G G5 490 301 387 456 556 808 Typica Carbonaria 510 210 190 186 166 54 Total 1000 511 577 642 722 932 Phenotype Frequency Color Initial Frequency Frequency (Round to 2 decimal places) Typica White 0.49 Carbonaria Black 0:51 Allele Frequency Allele Initial Allele Frequency Gs Allele Frequendy Round to 2 decimal places) 970 0.30 P D Genotype Frequency Number of Moths Released Frequency GS Genotype initial Frequency Molt Color Moths os PHASE 4 Clean forest Complete the following steps: Select initial allele frequencies Click Next generation to wait a year for first generation of moths Click Capture moths to monitor population numbers 4 Calculate phenotype frequencies in 5th generation. Record in Lab Data 5 Calculate allele frequencies in 5th generation. Record in Lab Data 6 Calculate genotype frequencies and number of moths in 5th generation Record in Lab Data GO TO PHASE 5 Lab Data Phenotype Frequency Color Initial Frequency Frequency G (Round to 2 decimal places) Typica White 0.49 0 Carbonaria Black 0.51 0 Allele Frequency Allele Initial Allele Frequency G5 Allele Frequency (Round to 2 decimal places) 9 0.70 P D 0.30 Genotype Frequency Moths Genotype Color Moths Released initial Frequency Frequency G5 Number of Moths GS q? dd 490 Typica White 049 Carbonaria Dd Black 420 42 2pg p Carbonaria DD Black 90 09 How to calculated How to Calculate Phenotype Frequency 1) How to Calculate Genotypic Ratios By using phenotypic ratios of a characteristic like moth color in a parent population, we can predict the genotypic ratios in the next generation. There are 3 genotypes presenti lac Homozygous dominant (Carbonaria, DD) represented by the p2 value in the Hardy- Weinberg equation Homozygous recessive (Typica, dd) represented by the A value in the Hardy. Weinberg equation Heterozygous (Carbonaria Dd) is represented by the 2pg value in the Hardy-Weinberg equation . 2) This shows a population where 20 of the moths have the dominant dark color (Carbonara) and 80% have a light color movca) P Generation: typ Phenotypic Ratio 2016 carbonara 809 Typica d Allele Frequencies 0 Hardy-Weinberg Equation Pipa) 1 D 3) Using the phenotypic ratio, we can determine allele frequencies in the parental generation if the homozygous trait (q) is 0.8 then qis 0 89 3) Using the phenotypic ratio, we can determine allele frequencies in the parental generation. If the homozygous trait (q?) is 0.8 then q is 0.89. P Generation: Phenotypic Ratio: 20% Carbonaria 80% Typica Allele Frequencies: d = 0.89 Hardy-Weinberg Equation: if q? = 0.8, then q = 0.89 p? + 2(pa) + q? 1 4) Now that we know q is 0.89, p is 1.0 - 0.89. Therefore, p = 0.11 P Generation: Phenotypic Ratio: 20% Carbonaria 80% Typica Allele Frequencies: D-0.11 d 0.89 Hardy-Weinberg Equation: P + 9 = 10 p. 0.89 = 10 or p=10 - 0.89 = 0.11 p - 2(pq) + q = 1 5) Now that we know p = 0.11 and q = 0.89 in the parental generation, we can plug these numbers into the Hardy-Weinberg equation to predict the genotypic frequencies in the next generation P Generation: Phenotypic Ratio: 20% Carbonaria 80% Typica Allele Frequencies: D 0.11 d = 0.89 F, Generation Genotypes: DD Dd dd Genotype Frequencies: 0.01 0 20 0.79 Hardy-Weinberg Equation: (011) + 2(0.11 x 0.89) + (0.89) = 1.0 0.010 200.79-1.0 p2(pa) 1 ere we see that p2 (homozygous dominant) is 0.01 and a homozygous recessive) is. 39. Lastly, 2pg (heterozygous) is 0.20 as shown below. P Generation Phenotypic Ratio 20carbonara 8096 yolca Allele Frequencies: DO 089 F. Generation Genotypes: DD Dd dd Genotype Frequencies: 0.01 0.20 0.79 Hardy-Weinberg Equation: D-2(pa) - 1 Join 217475217475 in the Search for Truth Azcolvin429/Wikimedia Commons/CC by SA 3.0 Charles Darwin, the father ofevolution, was the first to publish the idea ofnatural selection. Natural selection is the mechanism for how evolution occurs over time. Basically, natural selection says that individuals within a population of a species that have favorableadaptationsfor their environment will live long enough to reproduce and pass down those desirable traits to their offspring. The less favorable adaptations will die off eventually and be removed from the gene pool of that species. Sometimes, these adaptations causenew speciesto come into existence if the changes are large enough. Even though this concept should be pretty straightforward and easily understood, there are several misconceptions about what natural selection is and what it means for evolution. Most likely, most of the misconceptions about natural selection come from this single phrase that has become synonymous with it. "Survival of the fittest"is how most people with only a superficial understanding of the process would describe it. While technically, this is a correct statement, the common definition of "fittest" is what seems to create the most problems for understanding the true nature of natural selection. Although Charles Darwin did use this phrase in a revised edition of his bookOn the Origin of Species, it was not intended to create confusion. In Darwin's writings, he intended for the word "fittest" to mean those who were most suited to their immediate environment. However, in the modern use of language, "fittest" often means strongest or in best physical condition. This is not necessarily how it works in the natural world when describing natural selection. In fact, the "fittest" individual may actually be much weaker or smaller than others in the population. If the environment favored smaller and weaker individuals, then they would be considered more fit than their stronger and larger counterparts. Nick Youngson/Wikimedia Commons/CC by SA 3.0 This is another case of common use of language that causes confusion in what is actually true when it comes to natural selection. A lot of people reason that since most individuals within a species fall into the "average" category, then natural selection must always favor the "average" trait. Isn't that what "average" means? While that is a definition of "average," it is not necessarily applicable to natural selection. There are cases when natural selection does favor the average. This would be calledstabilizing selection. However, there are other cases when the environment would favor one extreme over the other (directional selection) or both extremes and NOT the average (disruptive selection). In those environments, the extremes should be greater in number than the "average" or middle phenotype. Therefore, being an "average" individual is actually not desirable. There are several things incorrect about the above statement. First of all, it should be pretty obvious that Charles Darwin did not "invent" natural selection and that it had been going on for billions of years before Charles Darwin was born. Since life had begun on Earth, the environment was putting pressure on individuals to adapt or die out. Those adaptations added up and created all of the biological diversity we have on Earth today, and much more that has since died out throughmass extinctionsor other means of death. Another issue with this misconception is that Charles Darwin was not the only one to come up with the idea of natural selection. In fact, another scientist namedAlfred Russel Wallacewas working on the exact same thing at the exact same time as Darwin. The first known public explanation of natural selection was actually a joint presentation between both Darwin and Wallace. However, Darwin gets all the credit because he was the first to publish a book on the topic. Ragnar Schmuck/Getty Images While natural selection is the largest driving force behind evolution, it is not the only mechanism for how evolution occurs. Humans are impatient and evolution through natural selection takes an extremely long time to work. Also, humans seem to not like to rely on letting nature take its course, in some cases. This is whereartificial selectioncomes in. Artificial selection is a human activity designed to choose the traits that are desirable for species whether it becolor of flowersorbreed of dogs. Nature is not the only thing that can decide what is a favorable trait and what is not. Most of the time, human involvement and artificial selection are for aesthetics, but they can be used for agriculture and other important means. While this should happen, theoretically, when applying knowledge of what natural selection is and what it does over time, we know this is not the case. It would be nice if this did happen because that would mean any genetic diseases or disorders would disappear out of the population. Unfortunately, that does not seem to be the case from what we know right now. There will always be unfavorable adaptations or traits in the gene pool or natural selection would not have anything to select against. In order for natural selection to happen, there has to be something more favorable and something less favorable. Without diversity, there is nothing to select or to select against. Therefore, it seems like genetic diseases are here to stay.Science, Tech, Math All Science, Tech, MathHumanities All HumanitiesLanguages All LanguagesResources All Resources Share copy and redistribute the material in any medium or format for any purpose, even commercially. Adapt remix, transform, and build upon the material for any purpose, even commercially. The licensor cannot revoke these freedoms as long as you follow the license terms. Attribution You must give appropriate credit , provide a link to the license, and indicate if changes were made . You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use. ShareAlike If you remix, transform, or build upon the material, you must distribute your contributions under the same license as the original. No additional restrictions You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits. You do not have to comply with the license for elements of the material in the public domain or where your use is permitted by an applicable exception or limitation . No warranties are given. The license may not give you all of the permissions necessary for your intended use. For example, other rights such as publicity, privacy, or moral rights may limit how you use the material. ,the free encyclopedia that anyone can edit.117,937 active editors 7,001,149 articles in EnglishThe English-language Wikipedia thanks its contributors for creating more than seven million articles! Learn how you can take part in the encyclopedia's continued improvement.GL Mk.II transmitter vanRadar, Gun Laying, MarkI, or GL Mk.I for short, was an early World WarII radar system developed by the British Army to provide information for anti-aircraft artillery. There were two upgrades, GL/EF (elevation finder) and GL Mk.II (pictured), both improving the ability to determine a target's bearing and elevation. GL refers to the radar's ability to direct the guns onto a target, known as gun laying. The first GL sets were developed in 1936 using separate transmitters and receivers mounted on gun carriages. Several were captured in 1940, leading the Germans to believe falsely that British radar was much less advanced than theirs. The GL/EF attachment provided bearing and elevation measurements accurate to about a degree: this caused the number of rounds needed to destroy an aircraft to fall to 4,100, a tenfold improvement over early-war results. The Mk.II, which was able to directly guide the guns, lowered the rounds-per-kill to 2,750. About 410 Mk.Is and 1,679 Mk.IIs were produced. 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GaillardPeter DavidAlan YentobGerry ConnollySebastio SalgadoNominate an articleMay 30: Statehood Day in Croatia (1990)Johann Sebastian Bach1431 Hundred Years' War: After being convicted of heresy, Joan of Arc was burned at the stake in Rouen, France.1723 Johann Sebastian Bach (pictured) assumed the office of Thomaskantor in Leipzig, presenting the cantata Die Elenden sollen essen in St.Nicholas Church.1922 The Lincoln Memorial in Washington, D.C., featuring a sculpture of the sixteenth U.S. president Abraham Lincoln by Daniel Chester French, opened.1963 Buddhist crisis: A protest against pro-Catholic discrimination was held outside the National Assembly of South Vietnam in Saigon, the first open demonstration against President Ng nh Dim.2008 The Convention on Cluster Munitions, prohibiting the use, transfer, and stockpiling of cluster bombs, was adopted.Ma Xifan (d.947)Colin Blythe (b.1879)Norris Bradbury (b.1909)Wynonna Judd (b.1964)More anniversaries: May 29May 30May 31ArchiveBy emailList of days of the yearAboutSeventeen performing "Oh My!" in 2018South Korean boy band Seventeen made their debut on May 26, 2015, when they performed a showcase for their debut EP 17 Carat in front of a crowd of 1,000 people. Since then, the group have held 9 concert tours, 13 fan meetings, and have performed at a number of music festivals and awards shows. Their concert tours include the Right Here World Tour, which sold over one million tickets, and the Follow Tour, which was noted by Billboard as being the top grossing K-pop tour of 2023. In 2024, Seventeen made their first appearances at festivals in Europe, when they were the first South Korean act to perform at Glastonbury Festival's Pyramid Stage and as headliners for Lollapalooza Berlin. Seventeen's live performances are well regarded by fans and critics alike, and garnered them the award for Top K-pop Touring Artist at the 2024 Billboard Music Awards. (Fulllist...)Recently featured: Accolades received by Top Gun: MaverickNational preserve76th Primetime Emmy AwardsArchiveMore featured listsIgnace Tonen (1840 or 1841 15 March 1916), also known as Nias or by his Ojibwe name Maiagizis ('right/correct sun'), was a Teme-Augama Anishnabai chief, fur trader, and gold prospector in Upper Canada. He was a prominent employee of the Hudson's Bay Company. Tonen was the elected deputy chief before being the lead chief and later the life chief of his community. In his role as deputy, he negotiated with the Canadian federal government and the Ontario provincial government, advocating for his community to receive annual financial support from both. His attempts to secure land reserves for his community were thwarted by the Ontario premier Oliver Mowat. Tonen's prospecting triggered a 1906 gold rush and the creation of Kerr Addison Mines Ltd., although one of his claims was stolen from him by white Canadian prospectors. This photograph shows Tonen in 1909.Photograph credit: William John Winter; restored by Adam CuerdenRecently featured: Australian white ibisHell Gate BridgeAnemonoides blandaArchiveMore featured picturesCommunity portal The central hub for editors, with resources, links, tasks, and announcements.Village pump Forum for discussions about Wikipedia itself, including policies and technical issues.Site news Sources of news about Wikipedia and the broader Wikimedia movement.Teahouse Ask basic questions about using or editing Wikipedia.Help desk Ask questions about using or editing Wikipedia.Reference desk Ask research questions about encyclopedic topics.Content portals A unique way to navigate the encyclopedia.Wikipedia is written by volunteer editors and hosted by the Wikimedia Foundation, a non-profit organization that also hosts a range of other volunteer projects: CommonsFree media repository MediaWikiWiki software development Meta-WikiWikimedia project coordination WikibooksFree textbooks and manuals WikidataFree knowledge base WikinewsFree-content news WikiquoteCollection of quotations WikisourceFree-content library WikispeciesDirectory of species WikiversityFree learning tools WikivoyageFree travel guide WiktionaryDictionary and thesaurusThis Wikipedia is written in English. Many other Wikipedias are available; some of the largest are listed below. 1,000,000+ articles DeutschEspaolFranaisItalianoNederlandsPolskiPortugusSvenskaTing Vit 250,000+ articles Bahasa IndonesiaBahasa MelayuBn-lm-gCataletinaDanskEestiEsperantoEuskaraMagyarNorsk bokmlRomnSimple EnglishSloveninaSrpskiSrpskohrvatskiSuomiTrkeOzbekcha 50,000+ articles AsturianuAzrbaycancaBosanskiFryskGaeilgeGalegoHrvatskiKurdLatvieuLietuviNorsk nynorskShqipSlovenina Retrieved from " 2EP by Seventeen17 CaratEP by SeventeenReleasedMay29,2015(2015-05-29)GenreK-popdance-pophip hopLength16:48LanguageKoreanLabelPledis EntertainmentLOEN EntertainmentSeventeen chronology17 Carat(2015)Boys Be(2015)Singles from 17 Carat "Adore U"Released: May 29, 201517 Carat is the debut extended play (EP) by South Korean boy group Seventeen. It was released on May 29, 2015, by Pledis Entertainment and distributed by LOEN Entertainment. "Adore U" serves as the lead single for the EP.17 Carat features five tracks written, co-written, and co-produced by Seventeen's group members. "Adore U" was chosen as the lead single for the EP and was performed on multiple music shows by the group. "Shining Diamond" was used as a pre-single on the group's reality debut show. The group stated that the tracklist was chosen to reflect Seventeen's core concept of "boys' passion".[1] The album has two physical versions: one with a "black" themed photo card set, and the other with a "white" themed photo card set. All copies include a CD containing the songs and a fold-up poster/lyric sheet."Adore U" is the lead single of the extended play. It was written by Woozi, S.Coups, and Yeon Dong-geon.[2] The Korea Herald states "'Adore U' is a funky pop song about a teenage boy trying to navigate through puppy love."[3] It marks the beginning of the group's trilogy composed of the singles Adore U, Mansae, and Pretty U about a boy meeting, falling in love and asking out a girl. The track was composed and arranged by Woozi, Bumzu, and Yeon Dong-geon. The music video for the single was released on May 29, 2015, and was directed by Dee Shin. The dance choreography accompaniment to the song was choreographed by Hoshi and focuses on "storytelling, and on highlighting each member's strengths onstage".[4] The single has sold more than 38,000 digital copies and peaked at number 13 on the Billboard US World Chart.The EP has sold over 82,972 copies in South Korea.[5] It peaked at number 4 on the Korean Gaon Album Chart[6] and number 8 on the US World Billboard Chart.[7]Year-end listsCritic/publicationListRankRef.BillboardThe 10 Best K-pop Album of 2015Placed[8]Hoshi participated in the choreography of "Adore U" and "Shining Diamond", Dino choreographed "Jam Jam".[9]Official track list[10]No.TitleLyricsMusicArrangementsLength1."Shining Diamond"WooziVernonS.CoupsKim Min-jeongWooziMasterKeyRishiMasterKeyRishi3:242.""Adore U"" (; Akkinda)WooziVernonS.CoupsBumzuWooziBumzuYeon Dong-geonWooziBumzuYeon Dong-geon3:073."Ah Yeah" (Hip-Hop unit)S. CoupsVernonWonwooMingyuCream DoughnutRishiCream DoughnutRishi3:294."Jam Jam" (Performance unit + Vernon)WooziHoshiDinoVernonWooziCream DoughnutCream Doughnut3:255."20" (Vocal unit)WooziWooziWon Yeong-heonWon Yeong-heonDong Ne-hyeong3:23Weekly chart performance for 17 CaratChart (2015-2023)PeakpositionJapanese Albums (Oricon)[11]46South Korean Albums (Gaon)[12]4US World Albums (Billboard)[13]8Year-end chart performance for 17 CaratChart (2015)PeakpositionSouth Korean Albums (Gaon)[14]47^ "Seventeen hopes to shine like diamonds with '17 Carat'". The Korea Herald. 26 May 2015. Retrieved 30 November 2016.^ "Adore U". Color Coded Lyrics. 29 May 2015. Retrieved 29 November 2016.^ "Seventeen hopes to shine like diamonds with '17 Carat". The Korea Herald. 26 May 2015. Retrieved 30 November 2016. "Seventeen hopes to shine like diamonds with '17 Carat'". The Korea Herald. 26 May 2015. 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Retrieved February 17, 2024.Retrieved from " 3The following pages link to 17 Carat External tools(link counttransclusion countsorted list) See help page for transcluding these entriesShowing 50 items.View (previous 50 | next 50) (20 | 50 | 100 | 250 | 500)Main Page (links | edit)Pledis Entertainment discography (links | edit)List of 2015 albums (links | edit)2015 in South Korean music (links | edit)Seventeen (South Korean band) (links | edit)S.Coups (links | edit)Vernon (rapper) (links | edit)Wonwoo (links | edit)List of awards and nominations received by Seventeen (links | edit)Seventeen discography (links | edit)Love & Letter (links | edit)Joshua (singer) (links | edit)17 carat (redirect page) (links | edit)Going Seventeen (links | edit)List of Seventeen live performances (links | edit)Teen, Age (links | edit)Al1 (links | edit)Bumzu (links | edit)Boys Be (EP) (links | edit)You Make My Day (links | edit)You Made My Dawn (links | edit)Jun (Chinese entertainer) (links | edit)List of Stray Kids live performances (links | edit)The8 (links | edit)An Ode (links | edit)Seungkwan (links | edit)Fallin' Flower (links | edit)Heng:gar (links | edit)Semicolon (EP) (links | edit)Your Choice (links | edit)Going Seventeen (web series) (links | edit)Not Alone (Seventeen song) (links | edit)Attacca (EP) (links | edit)Rock with You (Seventeen song) (links | edit)Woozi (links | edit)Hoshi (South Korean singer) (links | edit)Don't Wanna Cry (Seventeen song) (links | edit)Darl+ing (links | edit)Face the Sun (links | edit)Left & Right (Seventeen song) (links | edit)24H (EP) (links | edit)We Make You (links | edit)Hot (Seventeen song) (links | edit)Dream (Seventeen EP) (links | edit)BSS (band) (links | edit)FML (EP) (links | edit)Super (Seventeen song) (links | edit)Always Yours (album) (links | edit)Seventeenth Heaven (links | edit)View (previous 50 | next 50) (20 | 50 | 100 | 250 | 500)Retrieved from " WhatLinksHere/17_Carat"

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