

## YADRO REAKSIYALARI

41. Biror element izotopining radioaktiv yemirilishida pozitron ajralib chiqsa, qanday jarayon sodir bo'ladi?

- 1) massasi deyarli o'zgarmaydi;
  - 2) elektron yadroga qulaydi;
  - 3) neytron protonga aylanadi;
  - 4) proton neytronga aylanadi.
- A) 1, 4 B) 1, 3 C) 2, 4 D) 2, 3

42. Biror element izotopining radioaktiv yemirilishida  $\beta$ -zarracha ajralib chiqsa, qanday jarayon kuzatiladi?

- 1) massasi deyarli o'zgarmaydi;
  - 2) elektron yadroga qulaydi;
  - 3) neytron protonga aylanadi;
  - 4) proton neytronga aylanadi.
- A) 1,4 B) 1,3 C) 2,4 D) 2,3

43. Elektronning yadroga qulashi natijasida qanday o'zgarish kuzatiladi?

- 1) neytron protonga aylanadi;
  - 2) proton neytronga aylanadi;
  - 3) yadrozaryadiortadi;
  - 4) yadro zaryadi kamayadi.
- A) 1,3 B) 1,4 C) 2,3 D) 2,4

535.  ${}_{100}^{253}\text{Fm} \rightarrow \text{Bk} + x_2^4\alpha + y_{-1}\beta$  15,18 mg fermiy yemirilganda  $36,12 \cdot 10^{18}$  ta elektron hosil bo'lsa, berклиy izotopining nisbiy atom massasini aniqlang.

- A) 241 B) 247 C) 245 D) 249

536.  ${}_{99}^{252}\text{Es} \rightarrow \text{Pu} + x_2^4\alpha + y_{-1}\beta$  Ushbu yadro reaksiyasida 15,12 mg eynshteyniy yemirilishidan  $108,36 \cdot 10^{18}$  dona elektron ajralgan bo'lsa, plutoniy izotopining nisbiy atom massasini aniqlang.

- A) 230 B) 244 C) 236 D) 240

537.  $\text{Md} + 2_2^4\alpha \rightarrow {}_{103}^{261}\text{Lr} + x_{+1}\beta + y_0^1n$  Ushbu yadro reaksiyasida 13,05 mg lourensiy va  $21,07 \cdot 10^{19}$  dona neytron hosil bo'lsa, yemirilgan mendeleyeviy izotopining nisbiy atom massasini aniqlang.

- A) 260 B) 264 C) 248 D) 256

538.  ${}_{94}^{239}\text{Pu} \rightarrow x_2^4\alpha + y_{+1}\beta + {}_{83}^{214}\text{Bi} + 9_0^1n$  Ushbu yadro reaksiyasida  $54,18 \cdot 10^{19}$  dona pozitron hosil bo'lsa, reaksiyada parchalangan plutoniy miqdorini (mg) hisoblang.

- A) 53,6 B) 42,5 C) 71,7 D) 67,4

539.  ${}_{102}^{254}\text{No} \rightarrow x_2^4\alpha + y_{-1}\beta + {}_{96}^{238}\text{Cm}$  Ushbu yadro reaksiyasi asosida 12,7 mg nobeliy yemirilishidan hosil bo'lgan elektronlar sonini hisoblang.

- A)  $6,02 \cdot 10^{19}$  B)  $12,04 \cdot 10^{19}$  C)  $18,06 \cdot 10^{20}$  D)  $36,12 \cdot 10^{19}$

540.  ${}_{96}^{241}\text{Cm} + 2_2^4\alpha \rightarrow x_{-1}\beta + y_1^1p + \text{Np}$  Ushbu yadro reaksiyasi asosida 48,2 mg kyuriy yemirilganda  $24,08 \cdot 10^{19}$  dona elektron ajralsa, hosil bo'lgan neptuniy izotopidagi neytronlar sonini hisoblang.

- A) 152 B) 147 C) 144 D) 240

541.  ${}_{99}^{252}\text{Es} \rightarrow {}_{92}^{231}\text{U} + x_2^4\alpha + y_{-1}\beta + 5_0^1n$  Ushbu yadro reaksiyasi asosida 12,6 mg eynshteyniy yemirilishidan hosil bo'lgan elektronlar sonini hisoblang.

- A)  $6,02 \cdot 10^{18}$  B)  $12,04 \cdot 10^{19}$   
C)  $3,01 \cdot 10^{19}$  D)  $18,06 \cdot 10^{18}$

542.  ${}_{98}^{253}\text{Cf} \rightarrow x_2^4\alpha + y_{-1}\beta + \text{Cm}$  63,25 mg kaliforniy yemirilishidan  $6,02 \cdot 10^{20}$  dona elektron ajralgan bo'lsa, reaksiya natijasida hosil bo'lgan kyuriy izotopining nisbiy atom massasini aniqlang.

- A) 247 B) 234 C) 238 D) 241

543. 10,9 mg fransiy parchalanganda ( ${}_{87}^{218}\text{Fr} \rightarrow \text{Tl} + x\alpha + x_{-1}\beta + 2_0^1n$ )  $12,04 \cdot 10^{19}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan talliy izotopining nisbiy atom massasini toping.

- A) 204 B) 196 C) 200 D) 194

544. 11,2 mg radon parchalanganda ( ${}_{86}^{224}\text{Rn} \rightarrow \text{Bi} + x\alpha + y_{-1}\beta + 2_0^1n$ )  $15,05 \cdot 10^{19}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan vismut izotopidagi neytronlar sonini aniqlang.

- A) 110 B) 114 C) 123 D) 206

545. 70,5 mg plutoniy parchalanganda ( ${}_{94}^{235}\text{Pu} \rightarrow \text{Th} + x\alpha + y_0^1n$ )  $36,12 \cdot 10^{19}$  dona neytron hosil bo'lsa, reaksiya natijasida olingan toriy izotopidagi neytronlar sonini aniqlang.

- A) 140 B) 135 C) 230 D) 225

546. 75,9 mg kaliforniy parchalanganda ( ${}_{98}^{253}\text{Cf} \rightarrow x\alpha + y_{-1}\beta + 6\gamma + \text{Cm}$ )  $72,24 \cdot 10^{19}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan kyuriy izotopining nisbiy atom massasini toping.

- A) 241 B) 245 C) 238 D) 247

547. Radiy izotopi parchalanganda ( $\text{Ra} \rightarrow {}_{84}^{214}\text{Po} + x\alpha + y_0^1n$ ) 64,2 mg poloniy va  $54,18 \cdot 10^{19}$  dona neytron hosil bo'ldi. Reaksiyaga qatnashgan radiy izotopining nisbiy atom massasini aniqlang.

- A) 225 B) 217 C) 230 D) 235

548. Radiy izotopi parchalanganda ( $\text{Ra} \rightarrow {}_{84}^{214}\text{Po} + x\alpha + y_0^1n$ ) 64,2 mg poloniy va  $54,18 \cdot 10^{19}$  dona neytron hosil bo'ldi. Reaksiyaga qatnashgan radiy izotopi yadrosidagi neytronlar sonini aniqlang.

- A) 133 B) 137 C) 141 D) 225

565.  ${}_{94}^{242}\text{Pu} \rightarrow {}_{90}^{230}\text{Th} + x\alpha + y_{-1}\beta$  Ushbu yadro reaksiyasida 72,6 mg plutoniy yemirilishi natijasida hosil bo'lgan elektronlar sonini hisoblang.

- A)  $9,63 \cdot 10^{19}$  B)  $12,04 \cdot 10^{19}$  C)  $36,12 \cdot 10^{19}$  D)  $3,01 \cdot 10^{19}$

566.  ${}_{94}^{243}\text{Pu} \rightarrow {}_{89}^{224}\text{Ac} + x\alpha + y_{-1}\beta + 3_0^1n$  Ushbu yadro reaksiyasida  $54,18 \cdot 10^{18}$  ta elektron ajralgan bo'lsa, hosil bo'lgan aktiniy-224 miqdorini (mg) hisoblang.

- A) 2,24 B) 6,72 C) 8,96 D) 11,2

567.  ${}_{86}^{220}\text{Ra} \rightarrow {}_{83}\text{A} + x\alpha + y_{-1}\beta + 7_0^1n$  Ushbu yadro reaksiyasida 15,4 mg radon yemirilishidan  $21,07 \cdot 10^{19}$  dona elektron ajralgan bo'lsa, hosil bo'lgan A izotopidagi neytronlar sonini hisoblang.

A) 121 B) 118 C) 114 D) 197

568.  $^{252}_{99}\text{Es} \rightarrow \text{Pu} + x\alpha + y_{-}\beta$  Ushbu yadro reaksiyasida 75,6 mg eynshteyniy yemirilishidan  $54,18 \cdot 10^{19}$  dona elektron ajralgan bo'lsa, hosil bo'lgan plutoniy izotopidagi neytronlar sonini hisoblang.

A) 142 B) 236 C) 146 D) 150

569.  $^{239}_{94}\text{Pu} \rightarrow x\alpha + y_{+}\beta + \text{Bi} + 9^1_0n$  Ushbu yadro reaksiyasi asosida 95,6 mg plutoniy izotopi parchalanishidan  $72,24 \cdot 10^{19}$  dona pozitron hosil bo'lsa, vismut izotopining nisbiy atom massasini aniqlang.

A) 210 B) 230 C) 214 D) 223

570.  $^{254}_{102}\text{No} \rightarrow x\alpha + y_{-}\beta + ^{238}_{96}\text{Cm}$  Ushbu yadro reaksiyasi asosida 76,2 mg nobeliy yemirilishidan hosil bo'lgan elektronlar sonini hisoblang.

A)  $6,02 \cdot 10^{19}$  B)  $12,04 \cdot 10^{19}$

C)  $18,06 \cdot 10^{20}$  D)  $36,12 \cdot 10^{19}$

571.  $^{241}_{96}\text{Cm} + 2\alpha \rightarrow x_{-}\beta + y^1_1p + ^{240}_{93}\text{Np}$  Ushbu yadro reaksiyasida  $216,72 \cdot 10^{19}$  dona proton ajralgan bo'lsa, reaksiyada yemirilgan kyuriy izotopining miqdorini (mg) hisoblang.

A) 85,3 B) 62,5 C) 96,4 D) 76,7

572.  $^{252}_{99}\text{Es} \rightarrow ^{231}_{92}\text{U} + x\alpha + y_{-}\beta + 5^1_0n$  Ushbu yadro reaksiyasida  $42,14 \cdot 10^{18}$  elektron hosil bo'lsa, reaksiyada yemirilgan eynshteyniy izotopining miqdorini (mg) hisoblang.

A) 17,64 B) 24,78 C) 8,34 D) 31,56

573.  $^{253}_{98}\text{Cf} \rightarrow x\alpha + y_{-}\beta + \text{Cm}$  Ushbu yadro reaksiyasida 10,12 mg kaliforniy yemirilishidan  $96,32 \cdot 10^{18}$  dona elektron ajralgan bo'lsa, reaksiya natijasida hosil bo'lgan kyuriy izotopidagi neytronlar sonini hisoblang.

A) 151 B) 145 C) 141 D) 241

574. Quyida berilgan yadro reaksiyasi asosida 15,68 mg fransiy yemirilishidan  $84,28 \cdot 10^{18}$  elektron ajralgan bo'lsa, hosil bo'lgan talliy izotopidagi neytron sonini hisoblang.  $^{224}_{87}\text{Fr} \rightarrow \text{Tl} + x\alpha + y_{-}\beta$

A) 131 B) 127 C) 122 D) 208

575. 9,28 mg protaktiniy parchalanganda ( $^{232}_{91}\text{Pa} \rightarrow \text{Pb} + x\alpha + y_{-}\beta$ )  $16,856 \cdot 10^{19}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan qo'rg'oshin izotopining nisbiy atom massasini toping.

A) 210 B) 197 C) 207 D) 200

576. 9,36 mg plutoniy parchalanganda ( $^{234}_{94}\text{Pu} \rightarrow \text{Ac} + x\alpha + y_{-}\beta$ )  $24,08 \cdot 10^{18}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan aktiniy izotopining nisbiy atom massasini toping.

A) 224 B) 228 C) 222 D) 220

577. 75 mg eynshteyniy parchalanganda ( $^{250}_{99}\text{Es} \rightarrow \text{U} + x\alpha + y_{-}\beta + 3^1_0n$ )  $18,06 \cdot 10^{19}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan uran izotopidagi neytronlar sonini aniqlang.

A) 139 B) 146 C) 142 D) 231

578. 12,55 mg eynshteyniy parchalanganda ( $^{251}_{99}\text{Es} + 2\alpha \rightarrow y_{+}\beta + x^1_0n + \text{Md}$ )  $27,09 \cdot 10^{19}$  dona neytron hosil bo'lsa, reaksiya natijasida olingan mendeleyeviy izotopidagi neytronlar sonini aniqlang.

A) 147 B) 149 C) 154 D) 250

579. 47,2 mg kyuriy parchalanganda ( $^{236}_{96}\text{Cm} + 2\alpha \rightarrow x_{-}\beta + y^1_1H + \text{Np}$ )  $36,12 \cdot 10^{19}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan neptuniy izotopining nisbiy atom massasini toping.

A) 231 B) 232 C) 236 D) 234

580. Protaktiniy izotopi parchalanganda ( $\text{Pd} \rightarrow ^{200}_{82}\text{Pb} + x\alpha + y_{-}\beta + 6^1_0n$ ) 60 mg qo'rg'oshin va  $54,18 \cdot 10^{19}$  dona elektron hosil bo'ldi. Reaksiyaga qatnashgan protaktiniy izotopining nisbiy atom massasini aniqlang.

A) 232 B) 230 C) 236 D) 228

581.  $^{225}_{90}\text{Th} \rightarrow \text{Pb} + x\alpha + y^0_1e + 5^1_0n$  Ushbu yadro reaksiyasi asosida 11,25 mg toriy yemirilishidan  $12,04 \cdot 10^{19}$  elektron ajralgan bo'lsa, reaksiya natijasida hosil bo'lgan qo'rg'oshin izotopidagi neytron sonini hisoblang.

A) 196 B) 114 C) 200 D) 112

582.  $^{225}_{90}\text{Th} \rightarrow \text{Pb} + x\alpha + y^0_1e + 5^1_0n$  Ushbu yadro reaksiyasi asosida 11,25 mg toriy yemirilishidan  $12,04 \cdot 10^{19}$  elektron ajralgan bo'lsa, reaksiya natijasida hosil bo'lgan qo'rg'oshin izotopining nisbiy atom massasini hisoblang.

A) 196 B) 114 C) 200 D) 112

583.  $^{228}_{91}\text{Pa} \rightarrow \text{Rn} + x\alpha + y^0_1e + 2^1_0n$  Ushbu yadro reaksiyasi asosida 11,4 mg protaktiniy yemirilishidan  $9,03 \cdot 10^{19}$  elektron ajralgan bo'lsa, reaksiya natijasida hosil bo'lgan radon izotopining nisbiy atom massasini hisoblang.

A) 124 B) 211 C) 210 D) 120

584.  $^{228}_{91}\text{Pa} \rightarrow \text{Rn} + x\alpha + y^0_1e + 2^1_0n$  Ushbu yadro reaksiyasi asosida 11,4 mg protaktiniy yemirilishidan  $9,03 \cdot 10^{19}$  elektron ajralgan bo'lsa, reaksiya natijasida hosil bo'lgan radon izotopidagi neytron sonini hisoblang.

A) 124 B) 211 C) 210 D) 120

585.  $^{246}_{94}\text{Pu} \rightarrow \text{Th} + x\alpha + y^0_1e + 2^1_0n$  Ushbu yadro reaksiyasi asosida 9,84 mg plutoniy yemirilishidan  $48,16 \cdot 10^{18}$  elektron ajralgan bo'lsa, reaksiya natijasida hosil bo'lgan toriy izotopidagi neytron sonini hisoblang.

A) 232 B) 235 C) 139 D) 142

586.  $^{246}_{94}\text{Pu} \rightarrow \text{Th} + x\alpha + y^0_1e + 2^1_0n$  Ushbu yadro reaksiyasi asosida 9,84 mg plutoniy yemirilishidan  $48,16 \cdot 10^{18}$  elektron ajralgan bo'lsa, reaksiya natijasida hosil bo'lgan toriy izotopining nisbiy atom massasini hisoblang.

A) 232 B) 235 C) 139 D) 142

587.  $^{238}_{92}\text{U} + x^1_0\text{n} \rightarrow y^0_{-1}\text{e} + 4\gamma + ^{243}_{95}\text{Am}$  Ushbu yadro reaksiyasi asosida 9,52 mg uran yemirilishidan necha dona elektron hosil bo'ladi?

A)  $72,24 \cdot 10^{18}$  B)  $36,12 \cdot 10^{18}$  C)  $18,06 \cdot 10^{18}$  D)  $0,03 \cdot 10^{18}$

588.  $^{238}_{92}\text{U} + x^1_0\text{n} \rightarrow y^0_{-1}\text{e} + 6\gamma + ^{244}_{96}\text{Cm}$  Ushbu yadro reaksiyasi asosida 11,9 mg uran yemirilishidan necha dona elektron hosil bo'ladi?

A)  $12,04 \cdot 10^{19}$  B)  $6,02 \cdot 10^{18}$  C)  $1,02 \cdot 10^{18}$  D)  $18,06 \cdot 10^{18}$

589.  $^{234}_{93}\text{Np} + 3^4_2\alpha \rightarrow \text{Cm} + x^1_1\text{p} + y^0_{-1}\text{e}$  Ushbu yadro reaksiyasi asosida 9,36 mg neptuniy yemirilishidan  $12,04 \cdot 10^{19}$  elektron ajralgan bo'lsa, reaksiya natijasida hosil bo'lgan kyuriy izotopining nisbiy atom massasini hisoblang.

A) 232 B) 238 C) 139 D) 142

590.  $^{234}_{93}\text{Np} + 3^4_2\alpha \rightarrow \text{Cm} + x^1_1\text{p} + y^0_{-1}\text{e}$  Ushbu yadro reaksiyasi asosida 9,36 mg neptuniy yemirilishidan  $12,04 \cdot 10^{19}$  elektron ajralgan bo'lsa, reaksiya natijasida hosil bo'lgan kyuriy izotopidagi neytron sonini hisoblang.

A) 232 B) 238 C) 139 D) 142

591.  $^{246}_{94}\text{Pu} \rightarrow ^{230}_{90}\text{Th} + x^4_2\alpha + y^0_{-1}\text{e}$  Ushbu yadro reaksiyasida 98,4 mg plutoniya yemirilishi natijasida hosil bo'lgan elektronlar sonini hisoblang.

A)  $96,32 \cdot 10^{19}$  B)  $12,04 \cdot 10^{19}$  C)  $36,12 \cdot 10^{19}$  D)  $88,32 \cdot 10^{19}$

592.  $^{243}_{94}\text{Pu} \rightarrow ^{224}_{89}\text{Ac} + x^4_2\alpha + y^0_{-1}\text{e} + 7^1_0\text{n}$  Ushbu yadro reaksiyasida  $3,01 \cdot 10^{19}$  dona elektron ajralgan bo'lsa, reaksiyada hosil bo'lgan aktiniy miqdorini (mg) hisoblang.

A) 12,15 B) 6,72 C) 8,96 D) 11,2

593.  $^{220}_{86}\text{Rn} \rightarrow ^{83}\text{Bi} + x^4_2\alpha + y^0_{-1}\text{e} + 3^1_0\text{n}$  Ushbu yadro reaksiya asosida 5,5 mg radon yemirilishidan  $75,25 \cdot 10^{18}$  dona elektron ajralgan bo'lsa, vismut izotopidagi neytronlar sonini hisoblang.

A) 201 B) 118 C) 114 D) 197

594.  $^{245}_{94}\text{Pu} \rightarrow ^{214}_{83}\text{Bi} + x^4_2\alpha + y^0_{-1}\text{e} + 3^1_0\text{n}$  Ushbu yadro reaksiyada  $9,03 \cdot 10^{19}$  dona elektron hosil bo'lsa, reaksiyada parchalangan plutoniya miqdorini (mg) hisoblang.

A) 61,25 B) 12,25 C) 24,5 D) 36,65

595.  $^{254}_{102}\text{No} \rightarrow ^{234}_{96}\text{Cm} + x^4_2\alpha + y^0_{-1}\text{e} + 12\gamma$  Ushbu yadro reaksiya asosida 12,7 mg nobeliy yemirilishidan hosil bo'lgan elektronlar sonini hisoblang.

A)  $6,02 \cdot 10^{19}$  B)  $12,04 \cdot 10^{19}$  C)  $18,06 \cdot 10^{20}$  D)  $36,12 \cdot 10^{20}$

596.  $^{252}_{99}\text{Es} \rightarrow ^{210}_{92}\text{U} + x^4_2\alpha + y^0_{-1}\text{e} + 2^1_0\text{n}$  Ushbu yadro reaksiyada  $72,24 \cdot 10^{18}$  dona elektron hosil bo'lsa, reaksiyaga kirishgan eynshteyniy izotopining miqdorini (mg) hisoblang.

A) 15,12 B) 7,76 C) 12,6 D) 10,08

597.  $^{252}_{99}\text{Es} \rightarrow ^{210}_{92}\text{U} + x^4_2\alpha + y^0_{-1}\text{e} + 2^1_0\text{n}$  Ushbu yadro reaksiya asosida 12,6 mg eynshteyniy yemirilishidan hosil bo'lgan elektronlar sonini hisoblang.

A)  $9,03 \cdot 10^{19}$  B)  $12,04 \cdot 10^{19}$  C)  $3,01 \cdot 10^{19}$  D)  $18,06 \cdot 10^{18}$

598.  $^{254}_{102}\text{No} \rightarrow ^{234}_{96}\text{Cm} + x^4_2\alpha + y^0_{-1}\text{e} + 12\gamma$  Ushbu yadro reaksiyada 20,32 mg nobeliy yemirilishidan  $192,64 \cdot 10^{18}$  dona elektron ajralgan bo'lsa, kyuriy izotopining nisbiy atom massasini aniqlang.

A) 234 B) 244 C) 236 D) 241

599. 21,8 g fransiy parchalanganda  $4,816 \cdot 10^{23}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan talliy izotopining nisbiy atom massasini toping.

$^{218}_{87}\text{Fr} \rightarrow ^{218}_{81}\text{Tl} + x^4_2\alpha + y^0_{-1}\text{e} + 2^0_0\gamma$

A) 198 B) 196 C) 190 D) 194

600. 21,8 g fransiy parchalanganda  $4,816 \cdot 10^{23}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan talliy izotopidagi neytronlar sonini hisoblang.

$^{218}_{87}\text{Fr} \rightarrow ^{218}_{81}\text{Tl} + x^4_2\alpha + y^0_{-1}\text{e} + 2^0_0\gamma$

A) 107 B) 115 C) 109 D) 190

601. 11,9 mg plutoniya parchalanganda  $3,01 \cdot 10^{19}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan aktiniy izotopining nisbiy atom massasini toping.

$^{238}_{94}\text{Pu} \rightarrow ^{238}_{89}\text{Ac} + x^4_2\alpha + y^0_{-1}\text{e} + 6^0_0\gamma$

A) 226 B) 124 C) 222 D) 137

602. 11,9 mg plutoniya parchalanganda  $3,01 \cdot 10^{19}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan aktiniy izotopidagi neytronlar sonini hisoblang.

$^{238}_{94}\text{Pu} \rightarrow ^{238}_{89}\text{Ac} + x^4_2\alpha + y^0_{-1}\text{e} + 6^0_0\gamma$

A) 226 B) 124 C) 222 D) 137

603.  $^{241}_{96}\text{Cm} + 2^4_2\alpha \rightarrow ^{240}_{93}\text{Np} + x^0_{-1}\text{e} + y^1_1\text{p}$  Ushbu yadro reaksiyasida  $5,418 \cdot 10^{23}$  dona proton ajralgan bo'lsa, reaksiyada yemirilgan kyuriy izotopining miqdorini (g) hisoblang.

A) 24,1 B) 72,3 C) 96,4 D) 48,2

604.  $^{241}_{96}\text{Cm} + 2^4_2\alpha \rightarrow ^{240}_{93}\text{Np} + x^0_{-1}\text{e} + y^1_1\text{p}$  Ushbu yadro reaksiyasida  $48,16 \cdot 10^{21}$  dona elektron ajralgan bo'lsa, reaksiyada yemirilgan kyuriy izotopining miqdorini (g) hisoblang.

A) 2,41 B) 7,23 C) 9,64 D) 12,05

605.  $^{251}_{99}\text{Es} + 2^4_2\alpha \rightarrow ^{240}_{101}\text{Md} + x^0_{-1}\text{e} + y^1_0\text{n}$  15,06 g eynshteyniy parchalanganda  $108,36 \cdot 10^{21}$  dona neytron hosil bo'lsa, reaksiya natijasida olingan mendeleyeviy izotopidagi neytronlar sonini aniqlang.

A) 250 B) 149 C) 155 D) 256

606.  $^{251}_{99}\text{Es} + 2^4_2\alpha \rightarrow ^{240}_{101}\text{Md} + x^0_{-1}\text{e} + y^1_0\text{n}$  50,2 g eynshteyniy parchalanganda  $36,12 \cdot 10^{22}$  dona neytron hosil bo'lsa, reaksiya natijasida olingan mendeleyeviy izotopining nisbiy atom massasini toping.

A) 250 B) 149 C) 155 D) 256

607.  $^{253}_{100}\text{Fm} \rightarrow ^{207}_{87}\text{Bk} + x^4_2\alpha + y^0_{-1}\text{e} + 4\gamma$  50,6 g fermiy yemirilganda  $36,12 \cdot 10^{22}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan berkliy izotopining nisbiy atom massasini aniqlang.

A) 241 B) 247 C) 245 D) 261

608.  ${}_{100}^{253}\text{Fm} \rightarrow {}_{97}\text{Bk} + x_2^4\alpha + y_{-1}^0e + 4\gamma$  50,6 g fermiy yemirilganda  $36,12 \cdot 10^{22}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan berклиy izotopidagi neytronlar sonini aniqlang.

A) 241 B) 148 C) 245 D) 144

609.  ${}_{98}^{257}\text{Cf} \rightarrow {}_{96}\text{Cm} + x_2^4\alpha + y_{-1}^0e + 5\gamma$  51,4 g kaliforniy parchalanganda  $48,16 \cdot 10^{22}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan kyuriy izotopining nisbiy atom massasini aniqlang.

A) 241 B) 245 C) 238 D) 247

610.  ${}_{98}^{257}\text{Cf} \rightarrow {}_{96}\text{Cm} + x_2^4\alpha + y_{-1}^0e + 5\gamma$  51,4 g kaliforniy parchalanganda  $48,16 \cdot 10^{22}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan kyuriy izotopidagi neytronlar sonini aniqlang.

A) 149 B) 145 C) 138 D) 152

611.  ${}_{94}^{242}\text{Pu} \rightarrow {}_{90}^{230}\text{Th} + x_2^4\alpha + y_{-1}^0e$  Ushbu yadro reaksiyasida 72,6 mg plutoniy yemirilishi natijasida hosil bo'lgan elektronlar sonini hisoblang.

A)  $9,63 \cdot 10^{19}$  B)  $12,04 \cdot 10^{19}$  C)  $36,12 \cdot 10^{19}$  D)  $3,01 \cdot 10^{19}$

612.  ${}_{94}^{243}\text{Pu} \rightarrow {}_{89}^{224}\text{Ac} + x_2^4\alpha + y_{-1}^0e + 3_0^1n$  Ushbu yadro reaksiyasida  $54,18 \cdot 10^{18}$  ta elektron ajralgan bo'lsa, hosil bo'lgan aktiniy-224 miqdorini (mg) hisoblang.

A) 2,24 B) 6,72 C) 8,96 D) 11,2

613.  ${}_{86}^{220}\text{Rn} \rightarrow {}_{83}\text{A} + x_2^4\alpha + y_{-1}^0e + 7_0^1n$  Ushbu yadro reaksiyasida 15,4 mg radon yemirilishidan  $21,07 \cdot 10^{19}$  dona elektron ajralgan bo'lsa, hosil bo'lgan A izotopdagi neytronlar sonini hisoblang.

A) 121 B) 118 C) 114 D) 197

614.  ${}_{99}^{252}\text{Es} \rightarrow \text{Pu} + x_2^4\alpha + y_{-1}^0e$  Ushbu yadro reaksiyasida 75,6 mg eynshteyniy yemirilishidan  $54,18 \cdot 10^{19}$  dona elektron ajralgan bo'lsa, hosil bo'lgan plutoniy izotopidagi neytronlar sonini hisoblang.

A) 142 B) 236 C) 146 D) 150

615.  ${}_{94}^{239}\text{Pu} \rightarrow x_2^4\alpha + y_{-1}^0e + \text{Bi} + 9_0^1n$  Ushbu yadro reaksiyasi asosida 95,6 mg plutoniy izotopi parchalanishidan  $72,24 \cdot 10^{19}$  dona pozitron hosil bo'lsa, vismut izotopining nisbiy atom massasini aniqlang.

A) 210 B) 230 C) 214 D) 223

616.  ${}_{102}^{254}\text{No} \rightarrow x_2^4\alpha + y_{-1}^0e + {}_{96}^{238}\text{Cm}$  Ushbu yadro reaksiyasi asosida 76,2 mg nobeliy yemirilishidan hosil bo'lgan elektronlar sonini hisoblang.

A)  $6,02 \cdot 10^{19}$  B)  $12,04 \cdot 10^{19}$   
C)  $18,06 \cdot 10^{20}$  D)  $36,12 \cdot 10^{19}$

617.  ${}_{96}^{241}\text{Cm} + \frac{4}{2}\alpha \rightarrow x_{-2}^0e + y_1^1p + {}_{93}^{240}\text{Np}$  Ushbu yadro reaksiyasida  $216,72 \cdot 10^{19}$  dona proton ajralgan bo'lsa, reaksiyada yemirilgan kyuriy izotopining miqdorini (mg) hisoblang.

A) 85,3 B) 62,5 C) 96,4 D) 76,7

618.  ${}_{99}^{252}\text{Es} \rightarrow {}_{92}^{231}\text{U} + x_2^4\alpha \rightarrow x_{-1}^0e + 5_0^1n$  Ushbu yadro reaksiyasida  $42,14 \cdot 10^{18}$  elektron hosil bo'lsa, reaksiyada yemirilgan eynshteyniy izotopining miqdorini (mg) hisoblang.

A) 17,64 B) 24,78 C) 8,34 D) 31,56

619.  ${}_{98}^{253}\text{Cf} \rightarrow x_2^4\alpha + y_{-1}^0e + \text{Cm}$  Ushbu yadro reaksiyasida 10,12 mg kaliforniy yemirilishidan  $96,32 \cdot 10^{18}$  dona elektron ajralgan bo'lsa, reaksiya natijasida hosil bo'lgan kyuriy izotopidagi neytronlar sonini hisoblang.

A) 151 B) 145 C) 141 D) 241

620. Quyida berilgan yadro reaksiyasi asosida 15,68 mg fransiy yemirilishidan  $84,28 \cdot 10^{18}$  elektron ajralgan bo'lsa, hosil bo'lgan talliy izotopidagi neytron sonini hisoblang.  ${}_{87}^{224}\text{Fr} \rightarrow \text{Tl} + x_2^4\alpha + y_{-1}^0e$

A) 131 B) 127 C) 122 D) 208

621. 9,28 mg protaktiniy parchalanganda ( ${}_{91}^{232}\text{Pa} \rightarrow \text{Pb} + x_2^4\alpha + y_{-1}^0e$ )  $16,856 \cdot 10^{19}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan qo'rg'oshin izotopining nisbiy atom massasini toping.

A) 210 B) 197 C) 207 D) 200

622. 9,36 mg plutoniy parchalanganda ( ${}_{94}^{234}\text{Pu} \rightarrow \text{Ac} + x_2^4\alpha + y_{-1}^0e$ )  $24,08 \cdot 10^{18}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan aktiniy izotopining nisbiy atom massasini toping.

A) 224 B) 228 C) 222 D) 220

623. 75 mg eynshteyniy parchalanganda ( ${}_{99}^{250}\text{Es} \rightarrow \text{U} + x_2^4\alpha + y_{-1}^0e + 3_0^1n$ )  $18,06 \cdot 10^{19}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan uran izotopidagi neytronlar sonini aniqlang.

A) 139 B) 146 C) 142 D) 231

624. 12,55 mg eynshteyniy parchalanganda ( ${}_{99}^{251}\text{Es} + 2\alpha \rightarrow x_0^1n + y_{+1}^0e + \text{Md}$ )  $27,09 \cdot 10^{19}$  dona neytron hosil bo'lsa, reaksiya natijasida olingan mendeleeviy izotopidagi neytronlar sonini aniqlang.

A) 147 B) 149 C) 154 D) 250

625. 47,2 mg kyuriy parchalanganda ( ${}_{96}^{236}\text{Cm} + 2\alpha \rightarrow x_1^1\text{H} + y_{-1}^0e + \text{Np}$ )  $36,12 \cdot 10^{19}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan neptuniy izotopining nisbiy atom massasini toping.

A) 231 B) 232 C) 236 D) 234

626. Protaktiniy izotopi parchalanganda ( $\text{Pa} \rightarrow {}_{82}^{209}\text{Pb} + x\alpha + y_{-1}^0e + 6_0^1n$ ) 60 mg qo'rg'oshin va  $54,18 \cdot 10^{19}$  dona elektron hosil bo'ldi. Reaksiyaga qatnashgan protaktiniy izotopining nisbiy atom massasini aniqlang.

A) 232 B) 230 C) 236 D) 228

627.  ${}_{90}^{224}\text{Th} \rightarrow \text{Pb} + x\alpha + y_{-1}^0e + 2_0^1n$  Ushbu yadro reaksiyasi asosida 11,2 mg toriy yemirilishidan  $12,04 \cdot 10^{19}$  elektron ajralgan bo'lsa, reaksiya natijasida hosil bo'lgan qo'rg'oshin izotopidagi neytronlar sonini hisoblang.

A) 196 B) 114 C) 198 D) 116

628.  ${}^{224}_{90}\text{Th} \rightarrow \text{Pb} + x\alpha + y_{-1}^0e + 2{}^1_0n$  Ushbu yadro reaksiyasi asosida 11,2 mg toriy yemirilishidan  $12,04 \cdot 10^{19}$  elektron ajralgan bo'lsa, reaksiya natijasida hosil bo'lgan qo'rg'oshin izotopining nisbiy atom massasini hisoblang.  
A) 196 B) 114 C) 198 D) 116

629.  ${}^{227}_{91}\text{Pa} \rightarrow \text{Rn} + x\alpha + y_{-1}^0e$  Ushbu yadro reaksiyasi asosida 6,81 mg protaktiniy yemirilishidan  $54,18 \cdot 10^{18}$  elektron ajralgan bo'lsa, reaksiya natijasida hosil bo'lgan radon izotopining nisbiy atom massasini hisoblang.  
A) 124 B) 211 C) 210 D) 120

630.  ${}^{227}_{91}\text{Pa} \rightarrow \text{Rn} + x\alpha + y_{-1}^0e$  Ushbu yadro reaksiyasi asosida 6,81 mg protaktiniy yemirilishidan  $54,18 \cdot 10^{18}$  elektron ajralgan bo'lsa, reaksiya natijasida hosil bo'lgan radon izotopidagi neytronlar sonini hisoblang.  
A) 124 B) 211 C) 210 D) 125

631.  ${}^{246}_{94}\text{Pu} \rightarrow \text{Th} + x\alpha + y_{-1}^0e$  Ushbu yadro reaksiyasi asosida 7,38 mg plutoniy yemirilishidan  $36,12 \cdot 10^{18}$  elektron ajralgan bo'lsa, reaksiya natijasida hosil bo'lgan toriy izotopidagi neytronlar sonini hisoblang.  
A) 232 B) 234 C) 142 D) 144

632.  ${}^{246}_{94}\text{Pu} \rightarrow \text{Th} + x\alpha + y_{-1}^0e$  Ushbu yadro reaksiyasi asosida 7,38 mg plutoniy yemirilishidan  $36,12 \cdot 10^{18}$  elektron ajralgan bo'lsa, reaksiya natijasida hosil bo'lgan toriy izotopining nisbiy atom massasini hisoblang.  
A) 232 B) 234 C) 142 D) 144

633.  ${}^{238}_{92}\text{U} + x{}^1_0n \rightarrow y_{-1}^0e + {}^{243}_{95}\text{Am}$  Ushbu yadro reaksiyasi asosida 7,14 mg uran yemirilishidan necha dona elektron hosil bo'ladi?  
A)  $72,24 \cdot 10^{18}$  B)  $36,18 \cdot 10^{18}$  C)  $18,06 \cdot 10^{18}$  D)  $54,18 \cdot 10^{18}$

634.  ${}^{238}_{92}\text{U} + x{}^1_0n \rightarrow y_{-1}^0e + {}^{244}_{96}\text{Cm}$  Ushbu yadro reaksiyasi asosida 9,52 mg uran yemirilishidan necha dona elektron hosil bo'ladi?  
A)  $12,04 \cdot 10^{19}$  B)  $38,73 \cdot 10^{18}$  C)  $96,32 \cdot 10^{18}$  D)  $18,06 \cdot 10^{18}$

635.  ${}^{229}_{93}\text{Np} \rightarrow \text{Cm} + x{}^4_2\alpha + y_{-1}^0e$  Ushbu yadro reaksiyasi asosida 9,12 mg neptuniy yemirilishidan  $12,04 \cdot 10^{19}$  elektron ajralgan bo'lsa, reaksiya natijasida hosil bo'lgan kyuriy izotopining nisbiy atom massasini hisoblang.  
A) 224 B) 238 C) 128 D) 142

636.  ${}^{228}_{93}\text{Np} \rightarrow \text{Cm} + x{}^4_2\alpha + y_{-1}^0e$  Ushbu yadro reaksiyasi asosida 9,12 mg neptuniy yemirilishidan  $12,04 \cdot 10^{19}$  elektron ajralgan bo'lsa, reaksiya natijasida hosil bo'lgan kyuriy izotopidagi neytronlar sonini hisoblang.  
A) 224 B) 238 C) 128 D) 142

637.  ${}^{246}_{94}\text{Pu} \rightarrow {}^{230}_{90}\text{Th} + x{}^4_2\alpha + y_{-1}^0e$  Ushbu yadro reaksiyasida 7,38 mg plutoniy yemirilishi natijasida hosil bo'lgan elektronlar sonini hisoblang.  
A)  $96,32 \cdot 10^{19}$  B)  $12,04 \cdot 10^{18}$  C)  $72,24 \cdot 10^{18}$  D)  $46,21 \cdot 10^{19}$

638.  ${}^{236}_{94}\text{Pu} \rightarrow {}^{224}_{89}\text{Ac} + x{}^4_2\alpha + y_{-1}^0e$  Ushbu yadro reaksiyasida  $36,12 \cdot 10^{18}$  dona elektron ajralgan bo'lsa, reaksiyada hosil bo'lgan aktiniy miqdorini (mg) hisoblang.  
A) 14,16 B) 13,44 C) 8,96 D) 22,4

639.  ${}^{217}_{86}\text{Rn} \rightarrow \text{Bi} + x{}^4_2\alpha + y_{-1}^0e + 3{}^1_0n$  Ushbu yadro reaksiyasi asosida 6,51 mg radon yemirilishidan  $9,03 \cdot 10^{19}$  dona elektron ajralgan bo'lsa, vismut izotopidagi neytronlar sonini hisoblang.  
A) 201 B) 118 C) 115 D) 198

640.  ${}^{245}_{94}\text{Pu} \rightarrow {}^{214}_{83}\text{Bi} + x{}^4_2\alpha + y_{-1}^0e + 3{}^1_0n$  Ushbu yadro reaksiyasida  $72,24 \cdot 10^{18}$  dona elektron hosil bo'lsa, reaksiyada parchalangan plutoniy miqdorini (mg) hisoblang.  
A) 7,35 B) 8,56 C) 14,8 D) 9,8

641.  ${}^{254}_{102}\text{No} \rightarrow {}^{234}_{96}\text{Cm} + x{}^4_2\alpha + y_{-1}^0e$  Ushbu yadro reaksiyasi asosida 10,16 mg nobeliy yemirilishidan hosil bo'lgan elektronlar sonini hisoblang.  
A)  $18,06 \cdot 10^{18}$  B)  $12,04 \cdot 10^{18}$  C)  $96,32 \cdot 10^{18}$  D)  $36,12 \cdot 10^{18}$

642.  ${}^{250}_{99}\text{Es} \rightarrow {}^{230}_{92}\text{U} + x{}^4_2\alpha + y_{-1}^0e$  Ushbu yadro reaksiyasi natijasida  $54,18 \cdot 10^{19}$  dona elektron hosil bo'lsa, reaksiyaga kirishgan eynshteyniy izotopining miqdorini (mg) hisoblang.  
A) 69 B) 50 C) 75 D) 100

643.  ${}^{250}_{99}\text{Es} \rightarrow {}^{230}_{92}\text{U} + x{}^4_2\alpha + y_{-1}^0e$  Ushbu yadro reaksiyasi asosida 50 mg eynshteyniy yemirilishidan hosil bo'lgan elektronlar sonini hisoblang.  
A)  $9,03 \cdot 10^{19}$  B)  $54,18 \cdot 10^{19}$  C)  $6,02 \cdot 10^{19}$  D)  $36,12 \cdot 10^{19}$

644.  ${}^{250}_{102}\text{No} \rightarrow \text{Cm} + x{}^4_2\alpha + y_{-1}^0e$  Ushbu yadro reaksiyasida 12,5 mg nobeliy yemirilishidan  $12,04 \cdot 10^{19}$  dona elektron ajralgan bo'lsa, kyuriy izotopining nisbiy atom massasini aniqlang.  
A) 234 B) 244 C) 230 D) 242

645. 2,14 mg fransiy yadro reaksiyasi asosida parchalanganda  $48,16 \cdot 10^{18}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan talliy izotopining nisbiy atom massasini toping.  
 ${}^{214}_{87}\text{Fr} \rightarrow \text{Tl} + x{}^4_2\alpha + y_{-1}^0e$   
A) 105 B) 109 C) 190 D) 186

646. 2,14 mg fransiy parchalanganda  $48,16 \cdot 10^{18}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan talliy izotopidagi neytronlar sonini hisoblang.  
 ${}^{214}_{87}\text{Fr} \rightarrow \text{Tl} + x{}^4_2\alpha + y_{-1}^0e$   
A) 105 B) 109 C) 190 D) 186

647. 72,6 mg plutoniy parchalanganda  $54,18 \cdot 10^{19}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan aktiniy izotopining nisbiy atom massasini toping.  
 ${}^{242}_{94}\text{Pu} \rightarrow \text{Ac} + x{}^4_2\alpha + y_{-1}^0e$   
A) 226 B) 124 C) 222 D) 137

648. 72,6 mg plutoniy parchalanganda  $54,18 \cdot 10^{19}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan aktiniy izotopidagi neytronlar sonini hisoblang.  
 ${}^{242}_{94}\text{Pu} \rightarrow \text{Ac} + x{}^4_2\alpha + y_{-1}^0e$

A) 226 B) 124 C) 222 D) 137

649.  ${}_{100}^{256}\text{Fm} \rightarrow \text{Bk} + x_2^4\alpha + y_{-1}^0e$  12,8 mg fermiy yemirilganda  $9,03 \cdot 10^{19}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan berkliy izotopidagi neytronlar sonini aniqlang.

A) 244 B) 147 C) 245 D) 144

650.  ${}_{100}^{256}\text{Fm} \rightarrow \text{Bk} + x_2^4\alpha + y_{-1}^0e$  12,8 mg fermiy yemirilganda  $9,03 \cdot 10^{19}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan berkliy izotopining nisbiy atom massasini toping.

A) 244 B) 147 C) 245 D) 144

651.  ${}_{98}^{254}\text{Cf} \rightarrow \text{Cm} + x_2^4\alpha + y_{-1}^0e$  12,7 mg kaliforniy parchalanganda  $12,04 \cdot 10^{19}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan kyuriy izotopining nisbiy atom massasini aniqlang.

A) 242 B) 146 C) 245 D) 149

652.  ${}_{98}^{254}\text{Cf} \rightarrow \text{Cm} + x_2^4\alpha + y_{-1}^0e$  12,7 mg kaliforniy parchalanganda  $12,04 \cdot 10^{19}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan kyuriy izotopidagi neytronlar sonini aniqlang.

A) 242 B) 146 C) 245 D) 149

653.  ${}_{99}^{256}\text{Es} \rightarrow {}_{92}^{234}\text{U} + x_2^4\alpha + y_{-1}^0e + 2_0^1n$  Ushbu yadro reaksiyasida  $54,18 \cdot 10^{19}$  elektron hosil bo'lsa, reaksiyada yemirilgan eynshteyniy izotopining miqdorini (mg) hisoblang.

A) 10,24 B) 12,80 C) 25,6 D) 76,8

654.  ${}_{99}^{256}\text{Es} \rightarrow {}_{92}^{234}\text{U} + x_2^4\alpha + y_{-1}^0e + 2_0^1n$  Ushbu yadro reaksiyasida  $6,02 \cdot 10^{23}$  elektron hosil bo'lsa, reaksiyada yemirilgan eynshteyniy izotopining miqdorini (g) hisoblang.

A) 85,3 B) 95,8 C) 55,6 D) 76,8

655.  ${}_{94}^{245}\text{Pu} \rightarrow {}_{83}^{214}\text{Bi} + x_2^4\alpha + y_{-1}^0e + 3_0^1n$  Ushbu yadro reaksiyasida  $72,24 \cdot 10^{18}$  dona elektron hosil bo'lsa, reaksiya natijasida hosil bo'lgan vismut miqdorini (mg) hisoblang.

A) 7,35 B) 8,56 C) 14,8 D) 9,8

656.  ${}_{99}^{250}\text{Es} \rightarrow {}_{92}^{230}\text{U} + x_2^4\alpha + y_{-1}^0e$  Ushbu yadro reaksiyada  $54,18 \cdot 10^{19}$  dona elektron hosil bo'lsa, reaksiya natijasida hosil bo'lgan uran miqdorini (mg) hisoblang.

A) 69 B) 50 C) 75 D) 100

657.  ${}_{94}^{242}\text{Pu} \rightarrow {}_{90}^{226}\text{Th} + x_2^4\alpha + y_{-1}^0e$  Ushbu yadro reaksiyasida 48,4 mg plutoniy yemirilishi natijasida hosil bo'lgan elektronlar sonini hisoblang.

A)  $9,63 \cdot 10^{19}$  B)  $12,04 \cdot 10^{19}$  C)  $36,12 \cdot 10^{19}$  D)  $48,16 \cdot 10^{19}$

658.  ${}_{94}^{238}\text{Pu} \rightarrow {}_{89}^{223}\text{Ac} + x_2^4\alpha + y_{-1}^0e + 3_0^1n$  Ushbu yadro reaksiyada  $48,16 \cdot 10^{18}$  ta elektron ajralgan bo'lsa, hosil bo'lgan aktiniy miqdorini (mg) hisoblang.

A) 17,84 B) 6,72 C) 8,96 D) 21,4

659.  ${}_{86}^{222}\text{Rn} \rightarrow {}_{83}\text{A} + x_2^4\alpha + y_{-1}^0e + 4_0^1n$  Ushbu yadro reaksiyasida 14,271 mg radon yemirilishidan  $27,09 \cdot 10^{19}$  dona

elektron ajralgan bo'lsa, A izotopdagi neytronlar sonini hisoblang.

A) 136 B) 115 C) 114 D) 198

660.  ${}_{99}^{255}\text{Es} \rightarrow \text{Pu} + x_2^4\alpha + y_{-1}^0e$  Ushbu yadro reaksiyasida 20,4 mg eynshteyniy yemirilishidan  $24,08 \cdot 10^{19}$  dona elektron ajralgan bo'lsa, hosil bo'lgan plutoniy izotopidagi neytronlar sonini hisoblang.

A) 142 B) 136 C) 235 D) 141

661.  ${}_{86}^{222}\text{Rn} \rightarrow x_2^4\alpha + y_{+1}^0e + \text{Bi} + 9_0^1n$  Ushbu yadro reaksiyasi asosida 46,8 mg plutoniy izotopi parchalanishidan  $60,2 \cdot 10^{19}$  dona pozitron hosil bo'lsa, vismut izotopining nisbiy atom massasini aniqlang.

A) 130 B) 213 C) 214 D) 234

662.  ${}_{86}^{222}\text{Rn} \rightarrow x_2^4\alpha + y_{-1}^0e + {}_{96}^{242}\text{Cm}$  Ushbu yadro reaksiyasi asosida 38,1 mg fermiy yemirilishidan hosil bo'lgan elektronlar sonini hisoblang.

A)  $6,02 \cdot 10^{19}$  B)  $12,04 \cdot 10^{19}$  C)  $18,06 \cdot 10^{19}$  D)  $36,12 \cdot 10^{19}$

663.  ${}_{96}^{240}\text{Cm} + {}_2^4\alpha \rightarrow x_{-1}^0e + y_{+1}^1p {}_{93}^{237}\text{Np}$  Ushbu yadro reaksiyasida  $722,4 \cdot 10^{19}$  dona proton ajralgan bo'lsa, reaksiyada yemirilgan kyuriy izotopining miqdorini (mg) hisoblang.

A) 411,43 B) 205,7 C) 240 D) 76,7

1.  ${}_{90}^{224}\text{Th} \rightarrow \text{Pb} + x_2^4\alpha + y_{-1}^0e + 2_0^1n$

Ushbu yadro reaksiyasi asosida 11,2 mg toriy yemirilishidan  $12,04 \cdot 10^{19}$  elektron ajralgan bo'lsa, reaksiya natijasida hosil bo'lgan qo'rg'oshin izotopidagi neytron sonini hisoblang.

A) 196 B) 114 C) 198 D) 116

2.  ${}_{90}^{224}\text{Th} \rightarrow \text{Pb} + x_2^4\alpha + y_{-1}^0e + 2_0^1n$

Ushbu yadro reaksiyasi asosida 11,2 mg toriy yemirilishidan  $12,04 \cdot 10^{19}$  elektron ajralgan bo'lsa, reaksiya natijasida hosil bo'lgan qo'rg'oshin izotopining nisbiy atom massasini hisoblang.

A) 196 B) 114 C) 198 D) 116

3.  ${}_{91}^{227}\text{Pa} \rightarrow \text{Rn} + x_2^4\alpha + y_{-1}^0e$

Ushbu yadro reaksiyasi asosida 6,81 mg protaktiniy yemirilishidan  $54,18 \cdot 10^{18}$  elektron ajralgan bo'lsa, reaksiya natijasida hosil bo'lgan radon izotopining nisbiy atom massasini hisoblang.

A) 124 B) 211 C) 210 D) 120

4.  ${}_{91}^{227}\text{Pa} \rightarrow \text{Rn} + x_2^4\alpha + y_{-1}^0e$

Ushbu yadro reaksiyasi asosida 6,81 mg protaktiniy yemirilishidan  $54,18 \cdot 10^{18}$  elektron ajralgan bo'lsa, reaksiya natijasida hosil bo'lgan radon izotopidagi neytron sonini hisoblang.

A) 124 B) 211 C) 210 D) 125

5.  ${}_{94}^{246}\text{Pu} \rightarrow \text{Th} + x_2^4\alpha + y_{-1}^0e$

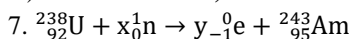
Ushbu yadro reaksiyasi asosida 7,38 mg plutoniy yemirilishidan  $36,12 \cdot 10^{18}$  elektron ajralgan bo'lsa, reaksiya natijasida hosil bo'lgan toriy izotopidagi neytron sonini hisoblang.

A) 232 B) 234 C) 142 D) 144

6.  ${}_{94}^{246}\text{Pu} \rightarrow \text{Th} + x_2^4\alpha + y_{-1}^0e$

Ushbu yadro reaksiyasi asosida 7,38 mg plutoniy yemirilishidan  $36,12 \cdot 10^{18}$  elektron ajralgan bo'lsa, reaksiya natijasida hosil bo'lgan toriy izotopining nisbiy atom massasini hisoblang.

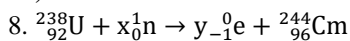
- A) 232                      **B) 234**                      C) 142                      D) 144



Ushbu yadro reaksiyasi asosida 7,14 mg uran yemirilishidan necha dona elektron hosil bo'ladi?

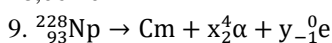
- A)  $72,24 \cdot 10^{18}$     B)  $36,18 \cdot 10^{18}$     C)  $18,06 \cdot 10^{18}$     **D)**

**54,18 · 10<sup>18</sup>**



Ushbu yadro reaksiyasi asosida 9,52 mg uran yemirilishidan necha dona elektron hosil bo'ladi?

- A)  $12,04 \cdot 10^{19}$     B)  $38,73 \cdot 10^{18}$     **C) 96,32 · 10<sup>18</sup>**    D)  $18,06 \cdot 10^{18}$



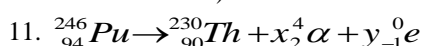
Ushbu yadro reaksiyasi asosida 9,12 mg neptuniy yemirilishidan  $12,04 \cdot 10^{19}$  elektron ajralgan bo'lsa, reaksiya natijasida hosil bo'lgan kyuriy izotopining nisbiy atom massasini hisoblang.

- A) 224**                      B) 238                      C) 128                      D) 142



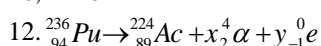
Ushbu yadro reaksiyasi asosida 9,12 mg neptuniy yemirilishidan  $12,04 \cdot 10^{19}$  elektron ajralgan bo'lsa, reaksiya natijasida hosil bo'lgan kyuriy izotopidagi neytron sonini hisoblang.

- A) 224                      B) 238                      C) **128**                      D) 142



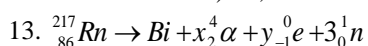
Ushbu yadro reaksiyasida 7,38 mg plutoniy yemirilishi natijasida hosil bo'lgan elektronlar sonini hisoblang.

- A)  $96,32 \cdot 10^{19}$     B)  $12,04 \cdot 10^{18}$     **C) 72,24 · 10<sup>18</sup>**    D)  $46,21 \cdot 10^{19}$



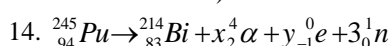
Ushbu yadro reaksiyasida  $36,12 \cdot 10^{18}$  dona elektron ajralgan bo'lsa, reaksiyada hosil bo'lgan aktiniy miqdorini (mg) hisoblang.

- A) 14,16                      **B) 13,44**                      C) 8,96                      D) 22,4



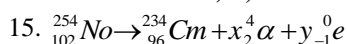
Ushbu yadro reaksiya asosida 6,51 mg radon yemirilishidan  $9,03 \cdot 10^{19}$  dona elektron ajralgan bo'lsa, vismut izotopidagi neytronlar sonini hisoblang.

- A) 201                      B) 118                      **C) 115**                      D) 198



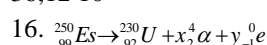
Ushbu yadro reaksiyada  $72,24 \cdot 10^{18}$  dona elektron hosil bo'lsa, reaksiyada parchalangan plutoniy miqdorini (mg) hisoblang.

- A) 7,35                      B) 8,56                      C) 14,8                      **D) 9,8**



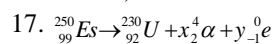
Ushbu yadro reaksiya asosida 10,16 mg nobeliy yemirilishidan hosil bo'lgan elektronlar sonini hisoblang.

- A)  $18,06 \cdot 10^{18}$                       B)  $12,04 \cdot 10^{18}$     **C) 96,32 · 10<sup>18</sup>**    D)  $36,12 \cdot 10^{18}$



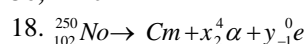
Ushbu yadro reaksiyada natijasida  $54,18 \cdot 10^{19}$  dona elektron hosil bo'lsa, reaksiyaga kirishgan eynshteyniy izotopining miqdorini (mg) hisoblang.

- A) 69                      B) 50                      **C) 75**                      D) 100



Ushbu yadro reaksiya asosida 50 mg eynshteyniy yemirilishidan hosil bo'lgan elektronlar sonini hisoblang.

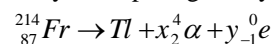
- A)  $9,03 \cdot 10^{19}$     B)  $54,18 \cdot 10^{19}$     C)  $6,02 \cdot 10^{19}$     **D) 36,12 · 10<sup>19</sup>**



Ushbu yadro reaksiyada 12,5 mg nobeliy yemirilishidan  $12,04 \cdot 10^{19}$  dona elektron ajralgan bo'lsa, kyuriy izotopining nisbiy atom massasini aniqlang.

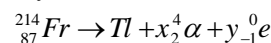
- A) 234                      B) 244                      **C) 230**                      D) 242

19. 2,14 mg fransiy yadro reaksiyasi asosida parchalanganda  $48,16 \cdot 10^{18}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan talliy izotopining nisbiy atom massasini toping.



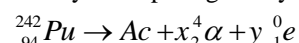
- A) 105                      B) 109                      C) 190                      **D) 186**

20. 2,14 mg fransiy parchalanganda  $48,16 \cdot 10^{18}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan talliy izotopidagi neytronlar sonini hisoblang.



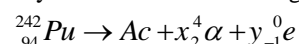
- A) 105**                      B) 109                      C) 190                      D) 186

21. 72,6 mg plutoniy yadro reaksiya asosida parchalanganda  $54,18 \cdot 10^{19}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan aktiniy izotopining nisbiy atom massasini toping.

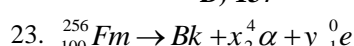


- A) 226**                      B) 124                      C) 222                      D) 137

22. 72,6 mg plutoniy parchalanganda  $54,18 \cdot 10^{19}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan aktiniy izotopidagi neytronlar sonini hisoblang.



- A) 226                      B) 124                      C) 222                      **D) 137**



12,8 mg fermiy yemirilganda  $9,03 \cdot 10^{19}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan berkliy izotopidagi neytronlar sonini aniqlang.

- A) 244                      **B) 147**                      C) 245                      D) 144



12,8 mg fermiy yemirilganda  $9,03 \cdot 10^{19}$  dona elektron hosil bo'lsa, reaksiya natijasida olingan berkliy izotopining nisbiy atom massasini toping.

A) 244                      B) 147                      C) 245  
D) 144



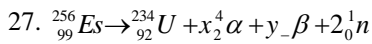
12,7 mg kaliforniy parchalanganda  $12,04 \cdot 10^{19}$  dona elektron hosil bo`lsa, reaksiya natijasida olingan kyuriy izotopining nisbiy atom massasini aniqlang.

A) 242                      B) 146                      C) 245  
D) 149



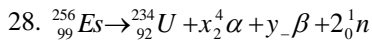
12,7 mg kaliforniy parchalanganda  $12,04 \cdot 10^{19}$  dona elektron hosil bo`lsa, reaksiya natijasida olingan kyuriy izotopidagi neytronlar sonini aniqlang.

A) 242                      B) 146                      C) 245  
D) 149



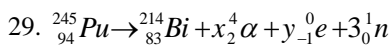
Ushbu yadro reaksiyasida  $54,18 \cdot 10^{19}$  elektron hosil bo`lsa, reaksiyada yemirilgan eynshteyniy izotopining miqdorini (mg) hisoblang.

A) 10,24                      B) 12,80                      C) 25,6  
D) 76,8



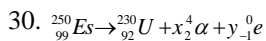
Ushbu yadro reaksiyasida  $6,02 \cdot 10^{23}$  elektron hosil bo`lsa, reaksiyada yemirilgan eynshteyniy izotopining miqdorini (g) hisoblang.

A) 85,3                      B) 95,8                      C) 55,6  
D) 76,8



Ushbu yadro reaksiyada  $72,24 \cdot 10^{18}$  dona elektron hosil bo`lsa, reaksiya natijasida hosil bo`lgan vismut miqdorini (mg) hisoblang.

A) 7,35                      B) 8,56                      C) 14,8  
D) 9,8



Ushbu yadro reaksiyada  $54,18 \cdot 10^{19}$  dona elektron hosil bo`lsa, reaksiya natijasida hosil bo`lgan uran miqdorini (mg) hisoblang.

A) 69                      B) 50                      C) 75                      D) 100