|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | **Chromosome number of some cultivated crop species** |  | |  | | | |  | | | | | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | **Crop name** |  | |  | | | |  | | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | **Species name** |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | **Diploid (2*n*)**  **chromosome number** |  | |  | | | |  | | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | **Cereal crops** |  | |  | | | |  | | | | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Barley |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Hordeurn vulgare* L. |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 14 |  | |  | | | |  | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Corn (maize) |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Zea mays* L. |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 20 |  | |  | | | |  | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Millet, finger (ragi) |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Eleusine coracana* (L.) Gaertn. |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 36 |  | |  | | | |  | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Millet, pearl (bajra) |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Pennisetum glacum* (L.) R.Br. |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 14 |  | |  | | | |  | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Oat |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Avena sativa* L. |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 42 |  | |  | | | |  | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Rice |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Oryza sativa* L. |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 24 |  | |  | | | |  | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Sorghum |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Sorghum bicolor* (L.) Moench |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 20 |  | |  | | | |  | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Wheat, bread |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Triticum aestivum* L. |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 42 |  | |  | | | |  | | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | **Fiber crops** |  | |  | | | |  | | | | |  |  | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Cotton, American upland |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Gossypium hirsutum* L. |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 52 |  | |  | | | |  | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Jute |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Corchorus capsularis* L., *C. olitorius* L. |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 14 |  | |  | | | |  | | | | |
|  |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | **Forage crops** |  | |  | | | |  | | | | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Alfalfa (lucerne) |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Medicago sativa* L. |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 32 |  | |  | | | |  | | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | **Oilseed crops** |  | |  | | | |  | | | | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Canola, Rape |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Brassica napus* L. |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 38 |  | |  | | | |  | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Flax (linseed) |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Linum usitatissimurn* L. |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 30 |  | |  | | | |  | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Mustard |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Brassica juncea* (L.) Coss. |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 36 |  | |  | | | |  | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Peanut (groundnut) |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Arachis hypogaea* L. |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 40 |  | |  | | | |  | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Safflower |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Carthamus tinctorius* L. |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 24 |  | |  | | | |  | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Soybean |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Glycine max* (L.) Merr. |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 40 |  | |  | | | |  | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Sunflower |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Helianthus annus* L. |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 34 |  | |  | | | |  | | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | **Pulse crops** |  | |  | | | |  | | | | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Chickpea (gram, garbanzo) |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Cicer arietinum* L. |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 16 |  | |  | | | |  | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Cowpea |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Vigna unguiculata* (L.) Walp. |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 22 |  | |  | | | |  | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Mungbean (green gram) |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Vigna radiata* (L.) Wilczek |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 22 |  | |  | | | |  | | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | **Root crops** |  | |  | | | |  | | | | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Potato |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Solanum tuberosum* L. |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 48 |  | |  | | | |  | | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | **Stimulant crops** |  | |  | | | |  | | | | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Tobacco |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Nicotiana tabacum* L. |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 48 |  | |  | | | |  | | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | **Sugar crops** |  | |  | | | |  | | | | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Sugar beet |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Beta vulgaris* L. |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 18 |  | |  | | | |  | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Sugarcane |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Saccharum officinarum* L. |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 80 |  | |  | | | |  | | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | **Vegetable crops** |  | |  | | | |  | | | | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Cabbage |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Brassica oleracea* L. |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 18 |  | |  | | | |  | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Onion |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Allium cepa* L. |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 16 |  | |  | | | |  | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Pepper |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Capsicum annuum* L. |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 24 |  | |  | | | |  | | | | |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | Tomato |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | *Lycopersicum esculentum* Mill. |  | |  | | | |  | | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | | |  | |  | | | |  | 24 |  | |  | | | |  | | | | |