

Question: I need a dichotomous key for the following fruits and vegetables: Peach, Tomato, White onion, purple onion, green pepper, strawberry, lettuce, apple, banana, pear.

Answer:

Dichotomous key for apple, peach, strawberry.
Family Rosaceae

1. Carpels 5, stems consist of a drop on the ventral suture seeded leaflets. Shrubs [2]
+ Carpels many, many, or 1 fruit - 1-seeded indehiscent nuts or drupes [3]

2. Leaves entire, without stipules [Meadowsweet, Spiraea (Spiraea)]
+ Leaves imparipinnately compound, with stipules [Fieldfare (Sorbaria)]

3. Fruits - nuts or small juicy drupes. Herbs, shrubs, small trees [4]
+ Fruit - juicy drupe. Small tree or tall shrub [Prunus (Padus)]

Prunus is a genus of trees and shrubs, which includes the plums, cherries, peaches, nectarines, apricots and almonds. Around 430 species are spread throughout the northern temperate regions of the globe. Many members of the genus are widely cultivated for fruit and ornament. The fruit from this genus are commonly called the stone fruit.

Prunus persica grows to 4–10 m (13–33 ft) tall and 6 in. in diameter. The leaves are lanceolate, 7–16 cm (2.8–6.3 in) long, 2–3 cm (0.79–1.2 in) broad, pinnately veined. The flowers are produced in early spring before the leaves; they are solitary or paired, 2.5–3 cm diameter, pink, with five petals. The fruit has yellow or whitish flesh, a delicate aroma, and a skin that is either velvety (peaches) or smooth (nectarines) in different cultivars. The flesh is very delicate and easily bruised in some cultivars, but is fairly firm in some commercial varieties, especially when green. The single, large seed is red-brown, oval shaped, approximately 1.3–2 cm long, and is surrounded by a wood-like husk. Peaches, along with cherries, plums and apricots, are stone fruits (drupes). There are various heirloom varieties, including the Indian peach, which arrives in the latter part of the summer

4. Flowers with 5-8 (rarely 1) carpels, fused with the inner wall of the receptacle and usually together. The fruit - apple (fruit involved in the formation of the sprawling receptacle). Shrubs and small trees [5]
+ Flowers are numerous, few (rarely 1) carpels, not fused with the receptacle and each other. Fruits - nuts or small juicy drupes. Grasses or small shrubs [8]

5. Leaves are simple [6]
+ Leaves imparipinnately compound, with 5-10 pairs of leaflets. Flowers in dense corymbose inflorescences [Rowan]

6. Thornless shrubs or trees. Leaves entire, entire or denticulate [7]
+ Shrubs with strong, sharp spines (rarely without them). The leaves are lobed or coarsely [Hawthorn (Crataegus)]

7. Leaves obtuse or slightly emarginate, entire. Flowers 0.4-1 cm in diameter. [Cotoneaster (Cotoneaster)]
+ The leaves at the top acute, margin finely crenate-serrate. The flowers are 2-3 cm in diameter. [Apple (Malus)]

Leaves 1.5-7 cm long, 0.8-3.5 cm wide, ovate or elliptic, apex usually quickly narrowed into short acute, serrate, glabrous on both sides. The flowers are white or pink, including 4-8, on long stalks in umbellate corymbs. Petals 10-20 mm long, oblong-ovate, slightly pubescent above [Apple Berry (*Malus baccata*)]

Trees grow up to 10–14 meters high. They have arching or overhanging red-brown branches and red-brown buds. Petioles are 2–5 cm long, with few glands. Leaves are elliptic or oval shaped, (3–8)×(2–3.5) cm in size. Pedicels are slender and 1.5–4 cm long. They bear white fragrant flowers of 3–3.5 cm diameter which groups by 4–6. Petals are white and oval-shaped, with a size of 2–2.5 cm. Fruits are red to yellow and are only about 1 cm in diameter; they form dense clusters and resemble cherries from a distance. Flowering occurs in spring, with fruits appearing in September–October.

8. Pistils and fruitlets on a flat, convex (hemispherical or conical) or slightly concave receptacle [9]
+ Pestle and fruitlets enclosed in urceolate or tubular recess (Hypanthia) [18]

9. Cup double with blades than 5-9, corresponding to the number of corolla lobes, we have the same number of external, smaller stakes, alternating with internal blades [13]
+ Calyx simple, 5-9-lobed, the outer cup is not [10]

10. Receptacle flat or slightly concave. Seedheads dry (of nuts) [11]
+ Receptacle convex. Seedheads of juicy drupelets [Stone berry, raspberry, blackberry, cloudberry (*Rubus*)]

11. Sepals and petals at number 5 (rarely 6) [12]
+ The sepals and petals are among the 8 [dryad (*Dryas*)]

12. The leaves are cut into linear segments. Stamens 5, with extended to the base of filaments [Hamerodos (*Chamaerhodos*)]
+ Leaves pinnate or pinnate, share them or lateral leaflets ovate-lanceolate. Stamens numerous, with narrowed to the base thread [meadowsweet (*Filipendula*)]

13. The bar goes sideways or from the top of the ovary, but the ripe fruit falls away completely [14]
+ The bar goes from the top of the ovary. When ripe, the fruit falls off the upper segment and the lower becomes hard, hook-shaped appendage [Geum (*Geum*)]

14. Receptacle is not growing and stays dry during the development of nuts [15]
+ Receptacle convex when ripe nuts is meaty, juicy (fruit - strawberries) [Strawberries, strawberry (*Fragaria*)]

Sepals are pressed to the fetus. Fruits are round at the base, yellowish-white, reddish only at the top or the side. The final apical tooth on small pieces of paper, as it sits in a recess [Strawberry (*Fragaria viridis*)]

Perennial, 5-25 cm tall. Open grassy slopes, grasslands and meadows.

+ Sepals in fruit splayed or bent downwards. The fruits are ovoid or conical, red. The final apical tooth on slips issued over the other [Wild strawberry (*Fragaria vesca*)]

Dichotomous key for lactuca Family Asteraceae

1. All the flowers in the basket, tubular, sometimes marginal enlarged, funnel-shaped or median tube, and the boundary Reed; Tridentata tabs at the top (2)
+ All the flowers in the basket of reeds (3)
2. All the flowers in a basket with a very short tube or filamentary unclear ligulate limb (3)
+ Marginal flowers in a basket Reed (37)
3. Baskets are surrounded by barbed apical l. Receptacle. covered with leathery Czech. covering achenes and fall with them. Strongly prickly plant with yellow flowers → Tym. Leaves with thick white midrib. Scolymus L.
+ Baskets without spiny upper leaves (4).
4. Achenes without pappus or tooth crown, sometimes internal achenes with short Kim tuft of bristles hulled (59)
+ Seeds with a tuft of simple or feathery hairs (5)
5. Inner bracts with pl. harden, swell and cover achene. Outer achenes with beak, internal without spout Zacintha Mill
+ Internal bracts at pl. do not change and do not include achenes (6)
6. All hair feather tuft
+ The hair tuft simple or slightly jagged (7)
7. Receptacle with bristle films greatly exceed the seed-kef. Achenes without spout. Almost leafless stalks Lagoseris MV
+ Receptacle naked(8)
8. Achenes without spout, sometimes tapering to the apex of a short stout spout-prominent part (9)
+ Seeds with filiform or spout at the top tapering to a long, thin carrier part
9. Tongues blue. Achenes with short stout narrowing Lactuca L.
+ Reeds yellow.

Dichotomous key for onion Family Liliaceae

1. Leaves are small, scaly, and in their bosoms develop cladodes. The flowers are unisexual, small, inconspicuous. Fruit - berry. The plants are dioecious (2)
- The leaves are normally developed, green. The flowers are large, painted, marked (3)
2. Cladodes acicular. Flowers on slender stalks Asparagus L.
- Cladodes flat leaf. The flowers are located on the midrib cladodes Ruscus L.
3. Plants with a rhizome (4)
- Plants with bulbs or corms. Fruit - Box (7)

- 4. Fruit - berry. Sepals connate (5)
 - Fruit - box. Sepals free or connate only at the base (6)
- 5. Plants without basal leaves. Stems numerous, double row spaced I. Perianth tubular, greenish-white Polygonatum Mill.
 - Plants with 2 (3) basal leaves. Perianth globose-campanulate, white Convallaria L.
- 6. Densely leafy stalk. Stamens unequal: Internal length Asphodeline Reichb.
 - Stem leafless, the leaves basal (7)
- 7. Inflorescence umbellate, surrounded by membranous sheath at the base of Allium L.
 - Inflorescence a different structure.

Dichotomous key for pear Family Rosaceae

- 1. Trees or shrubs (2)
 - Herbs.
- 2. Pistils are sitting on a flat or convex receptacle (13)
 - Pistil immersed in a concave, closed, fleshy, spherical torus (3)
- 3. Pistils free: not fused fruit - hard nuts Rosa L.
 - Pistils fused with receptacle, and usually each other (4)
- 4. Pistils, ventral not fused together. Shrubs with entire leaves (5)
 - Pistil ventrally each half or completely fused at
Back - fused with receptacle (5)
- 5. The flowers are solitary.
 - Flowers in inflorescences (6)
- 6. Inflorescence - raceme. Bush. Amelanchier Medic.
 - Inflorescence - guard (7)
- 7. Inflorescence - unbranched visor oliganthous (8)
 - Inflorescence - branched guard, many-
- 10. The bars at the base are free. Pyrus L.
 - The bars at the base connate.