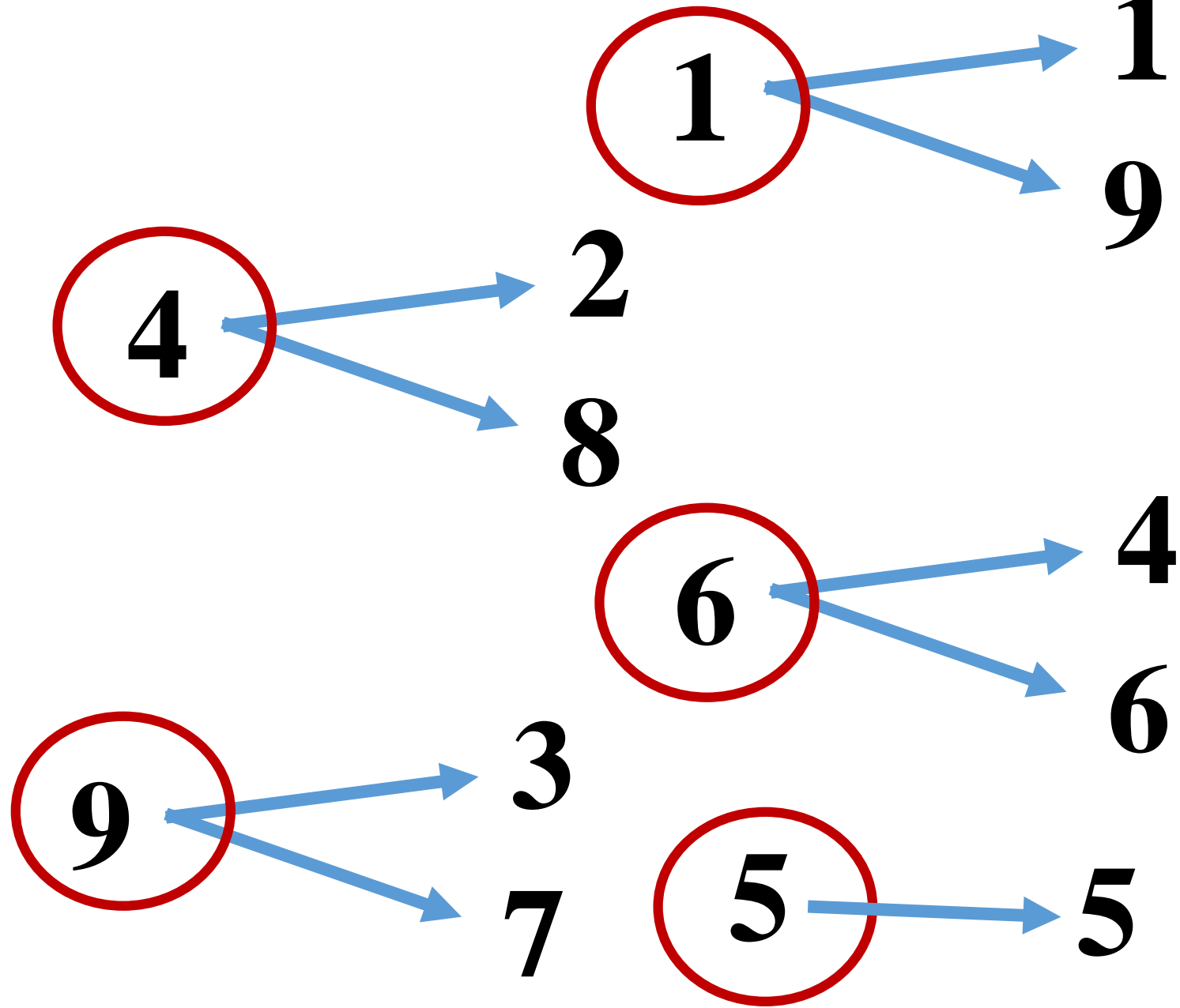


SQUARE ROOT TRICKS

$1^2 = 1$
 $2^2 = 4$
 $3^2 = 9$
 $4^2 = 16$
 $5^2 = 25$
 $6^2 = 36$
 $7^2 = 49$
 $8^2 = 64$
 $9^2 = 81$



$$\sqrt{12544}$$

2

8

$$11^2 = 121 \quad \begin{matrix} 4 \\ \swarrow \end{matrix} \quad 125$$

$$12^2 = 144 \quad \begin{matrix} 19 \\ \swarrow \end{matrix} \quad 11$$

112

$$\sqrt{12996}$$

4

6

$$11^2 = 121$$

8

129

11

$$12^2 = 144$$

15

114

$\sqrt{9409}$

3

7

$9^2 = 81$

13

94

$10^2 = 100$

6

9

97

$\sqrt{16129}$

3

7

$12^2 = 144$

17

161

$13^2 = 169$

8

12

127

**CUBE ROOT
WITHOUT PEN**

$$\begin{aligned} 1^3 &= 1 \\ 2^3 &= 8 \\ 3^3 &= 27 \\ 4^3 &= 64 \\ 5^3 &= 125 \\ 6^3 &= 216 \\ 7^3 &= 343 \\ 8^3 &= 512 \\ 9^3 &= 729 \\ 10^3 &= 1000 \end{aligned}$$

$$2 \longleftrightarrow 8$$

$$3 \longleftrightarrow 7$$

$$\sqrt[3]{912673}$$

$$9^3 = 729$$

912

7

$$10^3 = 1000$$

97

$$1^3 = 1$$

$$2^3 = 8$$

$$3^3 = 27$$

$$4^3 = 64$$

$$5^3 = 125$$

$$6^3 = 216$$

$$7^3 = 343$$

$$8^3 = 512$$

$$9^3 = 729$$

$$10^3 = 1000$$

$$\sqrt[3]{2685619}$$

139

$$11^3 = 1331$$

$$12^3 = 1728$$

$$13^3 = 2197$$

$$14^3 = 2744$$

$$15^3 = 3375$$

$$16^3 = 4096$$

$$17^3 = 4913$$

$$18^3 = 5832$$

$$19^3 = 6859$$

$$20^3 = 8000$$

$$\sqrt[3]{117649}$$

49

$$1^3 = 1$$

$$2^3 = 8$$

$$3^3 = 27$$

$$4^3 = 64$$

$$5^3 = 125$$

$$6^3 = 216$$

$$7^3 = 343$$

$$8^3 = 512$$

$$9^3 = 729$$

$$10^3 = 1000$$

$$\sqrt[3]{314432}$$

68

$$1^3 = 1$$

$$2^3 = 8$$

$$3^3 = 27$$

$$4^3 = 64$$

$$5^3 = 125$$

$$6^3 = 216$$

$$7^3 = 343$$

$$8^3 = 512$$

$$9^3 = 729$$

$$10^3 = 1000$$

SOME TRICKS FOR ADDITION

$$999 \frac{1}{7} + 999 \frac{2}{7} + 999 \frac{3}{7} + 999 \frac{4}{7} + 999 \frac{5}{7} + 999 \frac{6}{7} = ?$$

- (1) 2997
- (2) 6003
- (3) 5997
- (4) 3003
- (5) 7973

SOME TRICKS FOR ADDITION

$$198\frac{4}{7} + 304\frac{5}{9} + 488\frac{6}{11} + 194\frac{3}{7} + 513\frac{4}{9} + 306\frac{5}{11} = ?$$

- (1) 2003**
- (2) 2044**
- (3) 2006**
- (4) 2007**
- (5) 2008**

SOME TRICKS FOR ADDITION

$$196\frac{5}{17} + 423\frac{6}{9} + 311\frac{6}{17} + 586\frac{3}{9} + 188\frac{6}{17} = ?$$

- (1) 1702
- (2) 1706
- (3) 1806
- (4) 1902
- (5) 1802