

Exercise 1a

Date:



Example:



$$\begin{array}{ccc} 4600 & & 9200 \\ & \swarrow & \\ 13800 & & 18400 \end{array}$$

1. 1600 5. 1800 3600
2400
2. 1000 2000 6. 6000 8000
3. 3000 7. 1700 3400
4500
4. 3000 1200 8. 2400
 12000



9. 5000 15.
- 7500 3225 4300
10. 2200 4400 16. 3150 6300
-
11. 900 17. 780
- 2700 3120
12. 3600 18. 2780
- 7200 4170
13. 27000 19. 919
- 40,500 2757
14. 1250 20. 1400 2800
- 3750

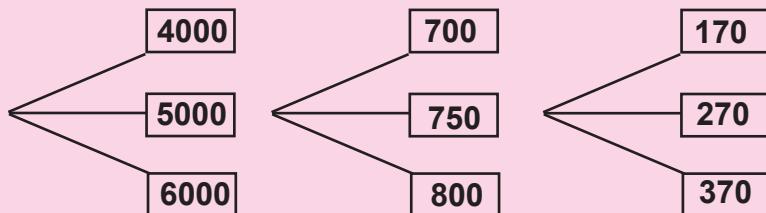


Exercise 1b



Date:

Example:



1. $\begin{array}{c} 3000 \\ \swarrow \quad \searrow \\ \boxed{} \\ 5000 \end{array}$
5. $\begin{array}{c} 750 \\ \swarrow \quad \searrow \\ \boxed{} \\ 850 \end{array}$
9. $\begin{array}{c} 2000 \\ \swarrow \quad \searrow \\ \boxed{} \\ 4000 \end{array}$
2. $\begin{array}{c} \boxed{} \\ \swarrow \quad \searrow \\ 165 \\ 170 \end{array}$
6. $\begin{array}{c} \boxed{} \\ \swarrow \quad \searrow \\ 1500 \\ 2000 \end{array}$
10. $\begin{array}{c} \boxed{} \\ \swarrow \quad \searrow \\ 500 \\ 600 \end{array}$
3. $\begin{array}{c} 300 \\ \swarrow \quad \searrow \\ 400 \\ \boxed{} \end{array}$
7. $\begin{array}{c} 100 \\ \swarrow \quad \searrow \\ \boxed{} \\ 200 \end{array}$
11. $\begin{array}{c} \boxed{} \\ \swarrow \quad \searrow \\ 900 \\ 1000 \end{array}$
4. $\begin{array}{c} 700 \\ \swarrow \quad \searrow \\ \boxed{} \\ 900 \end{array}$
8. $\begin{array}{c} 800 \\ \swarrow \quad \searrow \\ \boxed{} \\ 850 \end{array}$
12. $\begin{array}{c} 500 \\ \swarrow \quad \searrow \\ 600 \\ \boxed{} \end{array}$



13.
800
1000
16.
400
600
19.
2000
3000
14.
1000
3000
17.
7000
8000
20.
900
1000
15.
200
400
18.
1000
1050



Exercise 2a

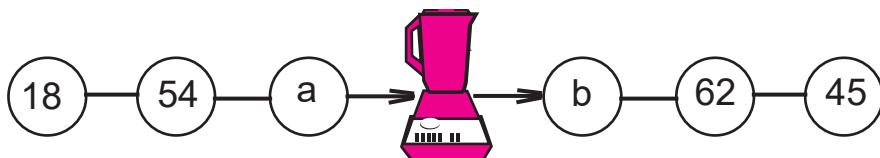


Date:

Example:



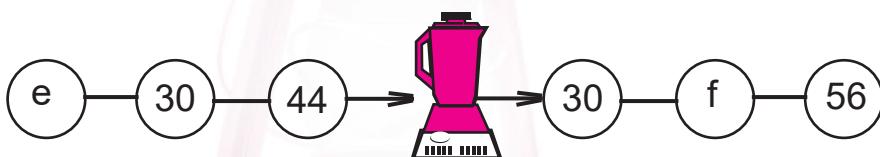
1.



2.



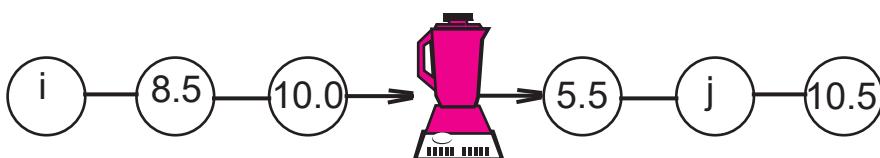
3.



4.



5.



Exercise 2b

Date:



Example:



24s

96s

145m

35m

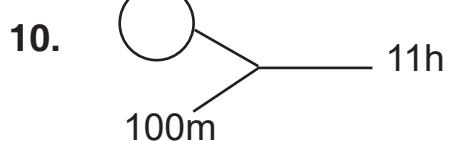
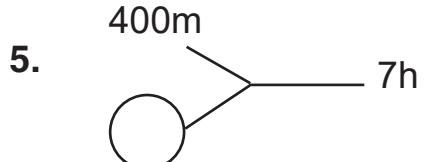
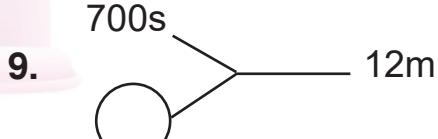
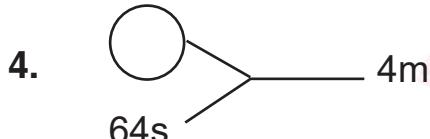
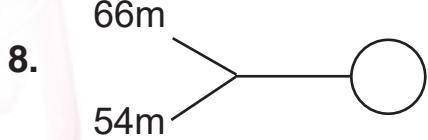
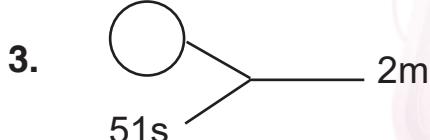
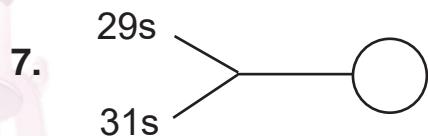
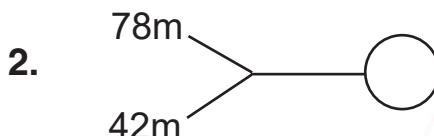
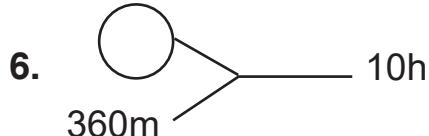
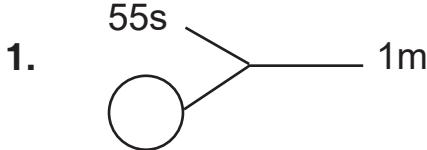
47s

193s

2m

3h

4m



6



NEW EDITION

Score:

Exercise 3a



Date:

Example:



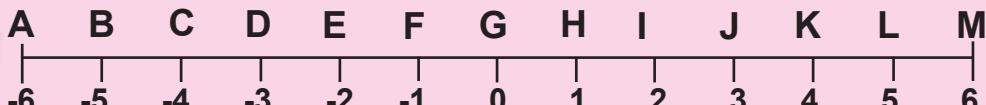
IX → X V → VI I → II

1. IV →
2. XI →
3. → XV
4. → XIX
5. XXV →
6. XXVIII →
7. LII →
8. XLV →
9. → III
10. → VII
11. XXXIX →
12. L →
13. XXII →
14. → XXX
15. I →
16. → XLIX
17. XLV →
18. → XXV
19. XXIII →
20. → IV



NEW EDITION

Score:

Example:**Alphanumeric line**

$$H + I = J$$

$$D + J = G$$

$$M + C = I$$

$$1. \quad L + H = \boxed{}$$

$$11. \quad L + D = \boxed{}$$

$$2. \quad M + D = \boxed{}$$

$$12. \quad M + \boxed{} = G$$

$$3. \quad K + E = \boxed{}$$

$$13. \quad G + \boxed{} = I$$

$$4. \quad \boxed{} + I = G$$

$$14. \quad K + E = \boxed{}$$

$$5. \quad L + \boxed{} = K$$

$$15. \quad B + H = \boxed{}$$

$$6. \quad H + H = \boxed{}$$

$$16. \quad I + J + H = \boxed{}$$

$$7. \quad \boxed{} + M = L$$

$$17. \quad A + K + J = \boxed{}$$

$$8. \quad F + H = \boxed{}$$

$$18. \quad E + I + J = \boxed{}$$

$$9. \quad L + H = \boxed{}$$

$$19. \quad K + H + G = \boxed{}$$

$$10. \quad L + C = \boxed{}$$

$$20. \quad H + I + J = \boxed{}$$



Exercise 4a



Date:

Example:



$$\frac{7}{4}$$

$$1\frac{3}{4}$$

$$\frac{17}{3}$$

$$5\frac{2}{3}$$

1. $\frac{9}{4}$ \longleftrightarrow

6.

$$\boxed{}$$
 \longleftrightarrow $2\frac{1}{6}$

2. \longleftrightarrow $4\frac{2}{5}$

7.

$$\frac{23}{2} \longleftrightarrow \boxed{}$$

3. $\frac{22}{3}$ \longleftrightarrow

8.

$$\boxed{} \longleftrightarrow 1\frac{1}{11}$$

4. \longleftrightarrow $6\frac{3}{7}$

9.

$$\frac{71}{8} \longleftrightarrow \boxed{}$$

5. $\frac{29}{3}$ \longleftrightarrow

10.

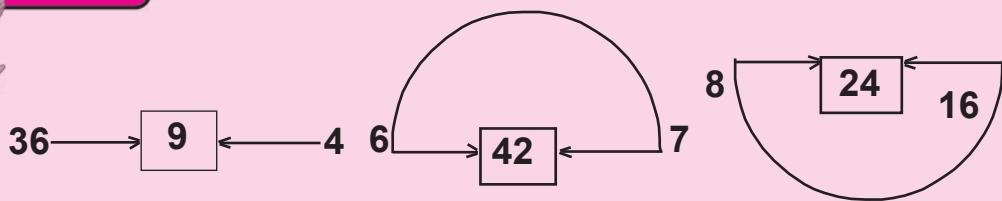
$$\boxed{} \longleftrightarrow 12\frac{5}{6}$$



Exercise 4b

Date:

Example:



1. $\square \rightarrow 6 \leftarrow 8$

6. $302 \rightarrow \square \leftarrow 202$

2. $15 \rightarrow \square \leftarrow 4$

7. $9 \rightarrow 108 \leftarrow \square$

3. $14 \rightarrow \square \leftarrow 21$

8. $50 \rightarrow \square \leftarrow 390$

4. $\square \rightarrow 65 \leftarrow 13$

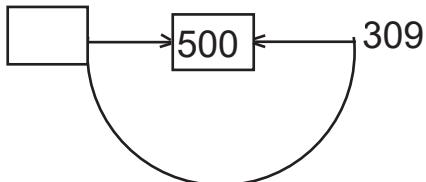
9. $\square \rightarrow 15 \leftarrow 5$

5. $408 \rightarrow 102 \leftarrow \square$

10. $16 \rightarrow \square \leftarrow 7$



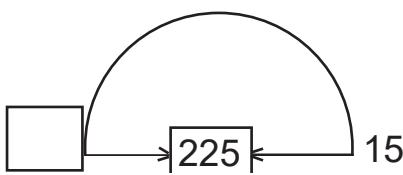
11.



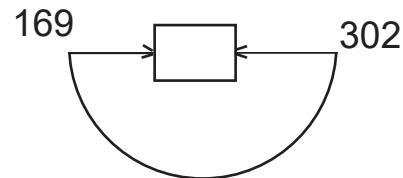
12.



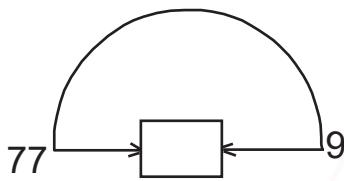
16.



17.



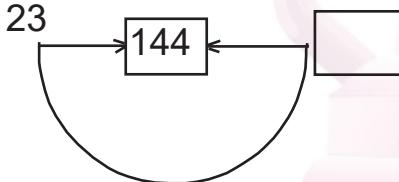
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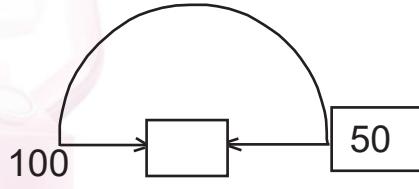
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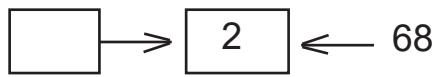
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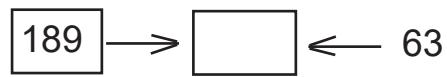
19.



15.



20.



Exercise 5a



Date:

Example:



1. $36 \rightarrow 48 \rightarrow a$ $\rightarrow 24 \rightarrow b \rightarrow 60$

2. $20 \rightarrow c \rightarrow 60$ $\rightarrow d \rightarrow 30 \rightarrow 50$

3. $e \rightarrow 120 \rightarrow 150$ $\rightarrow 70 \rightarrow f \rightarrow 120$

4. $5 \rightarrow g \rightarrow 11$ $\rightarrow h \rightarrow 6 \rightarrow 9$

5. $i \rightarrow 5 \rightarrow 9$ $\rightarrow 1 \rightarrow 4 \rightarrow j$



Exercise 5b



Date:

Example:



$$\frac{3}{5} \quad \underline{\hspace{2cm}} \quad \frac{6}{10}$$

$$\frac{5}{6} \quad \underline{\hspace{2cm}} \quad \frac{10}{12}$$

1. $\frac{1}{5} \quad \underline{\hspace{2cm}} \quad \boxed{}$

6. $\boxed{} \quad \underline{\hspace{2cm}} \quad \frac{6}{8}$

2. $\boxed{} \quad \underline{\hspace{2cm}} \quad \frac{4}{14}$

7. $\frac{5}{12} \quad \underline{\hspace{2cm}} \quad \boxed{}$

3. $\frac{3}{8} \quad \underline{\hspace{2cm}} \quad \boxed{}$

8. $\boxed{} \quad \underline{\hspace{2cm}} \quad \frac{10}{14}$

4. $\boxed{} \quad \underline{\hspace{2cm}} \quad \frac{10}{14}$

9. $\frac{7}{12} \quad \underline{\hspace{2cm}} \quad \boxed{}$

5. $\frac{4}{5} \quad \underline{\hspace{2cm}} \quad \boxed{}$

10. $\boxed{} \quad \underline{\hspace{2cm}} \quad \frac{2}{12}$

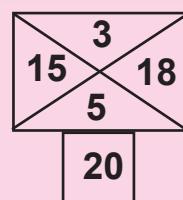
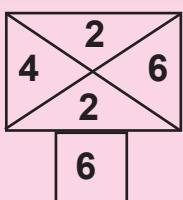


Exercise 5c

Date:



Example:



1. $24 \times 32 = 768$
5. $30 \times 40 = 1200$
9. $28 \times 32 = 896$
2. $16 \times 4 = 64$
6. $30 \times 36 = 1080$
10. $22 \times 33 = 726$
3. $5 \times 48 = 240$
7. $3 \times 36 = 108$
4. $56 \times 64 = 3584$
8. $32 \times 4 = 128$



Exercise 6a



Date:

Example:



$$\begin{array}{ccc} 18.22\text{cm} & 11.45\text{cm} & 14.28\text{kg} \\ \swarrow & \searrow & \swarrow \\ 29.67\text{cm} & & 23.98\text{kg} \end{array}$$

1. $\begin{array}{ccc} 22.16\text{cm} & 17.48\text{cm} & \boxed{} \\ \swarrow & \searrow & \\ & & \end{array}$
2. $\begin{array}{ccc} 15.33\text{cm} & \boxed{} & \\ \swarrow & \searrow & \\ 48.42\text{cm} & & \end{array}$
3. $\begin{array}{ccc} \boxed{} & 35.11\text{cm} & \\ \swarrow & \searrow & \\ 62.25\text{cm} & & \end{array}$
4. $\begin{array}{ccc} 5.12\text{cm} & 4.26\text{cm} & \boxed{} \\ \swarrow & \searrow & \\ & & \end{array}$
5. $\begin{array}{ccc} 15.32\text{cm} & 3.45\text{cm} & \boxed{} \\ \swarrow & \searrow & \\ & & \end{array}$
6. $\begin{array}{ccc} \boxed{} & & 18.15\text{kg} \\ \swarrow & \searrow & \\ & 31.50\text{kg} & \end{array}$
7. $\begin{array}{ccc} & & \boxed{} \\ 39.14\text{kg} & \swarrow & \\ & 46.38\text{kg} & \end{array}$
8. $\begin{array}{ccc} \boxed{} & & 61.12\text{kg} \\ \swarrow & \searrow & \\ & 82.60\text{kg} & \end{array}$
9. $\begin{array}{ccc} & & \boxed{} \\ 36.44\text{kg} & \swarrow & \\ & 55.51\text{kg} & \end{array}$
10. $\begin{array}{ccc} & 20.19\text{kg} & 19.02\text{kg} \\ & \swarrow & \searrow \\ \boxed{} & & \end{array}$

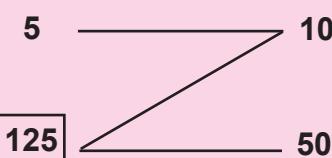
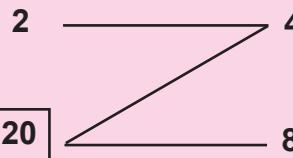


Exercise 6b



Date:

Example:



1. $8 \quad 16$
 $\square \quad 128$

6. $10 \quad \square$
 $500 \quad 200$

2. $6 \quad \square$
 $180 \quad 72$

7. $13 \quad 26$
 $845 \quad \square$

3. $15 \quad 30$
 $1125 \quad \square$

8. $\square \quad 40$
 $2000 \quad 800$

4. $\square \quad 6$
 $45 \quad 18$

9. $12 \quad 24$
 $\square \quad 288$

5. $11 \quad 22$
 $\square \quad 242$

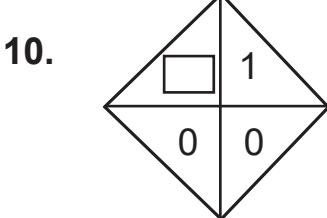
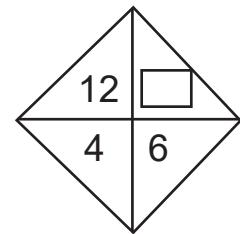
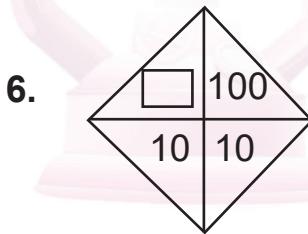
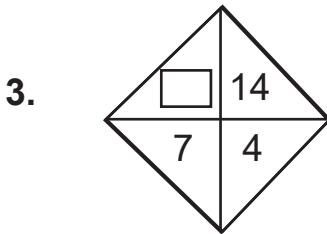
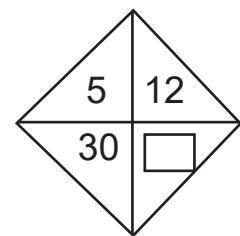
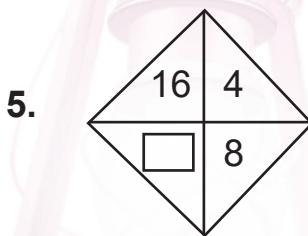
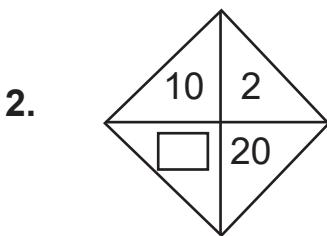
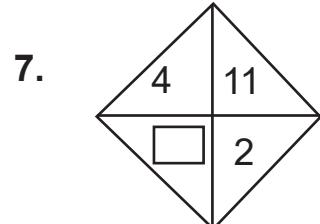
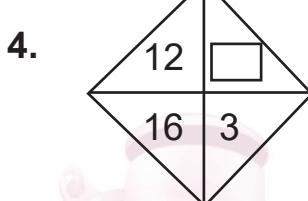
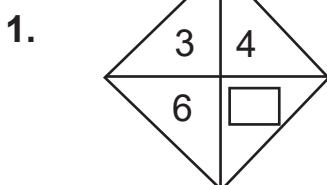
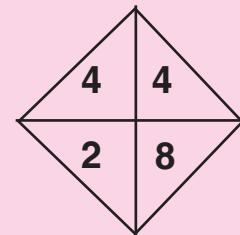
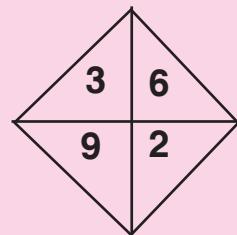
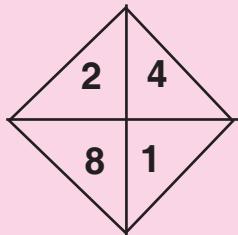
10. $18 \quad 36$
 $1620 \quad \square$



Exercise 6c

Date:

Example:



NEW EDITION

Score: _____

Exercise 7a



Date:

Example:



$$150 \longrightarrow 12 \longrightarrow 1800$$

$$200 \longrightarrow 10 \longrightarrow 2000$$

$$380 \longrightarrow 15 \longrightarrow 5700$$

1. $650 \longrightarrow 8 \longrightarrow \boxed{}$

8. $175 \longrightarrow \boxed{} \longrightarrow 1925$

2. $300 \longrightarrow \boxed{} \longrightarrow 3600$

9. $\boxed{} \longrightarrow 50 \longrightarrow 7500$

3. $\boxed{} \longrightarrow 15 \longrightarrow 6300$ 10. $400 \longrightarrow \boxed{} \longrightarrow 10,000$

4. $130 \longrightarrow 20 \longrightarrow \boxed{}$

5. $56 \longrightarrow \boxed{} \longrightarrow 616$

6. $\boxed{} \longrightarrow 32 \longrightarrow 3200$

7. $50 \longrightarrow 42 \longrightarrow \boxed{}$

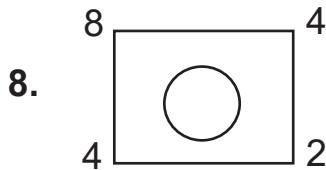
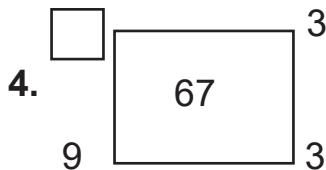
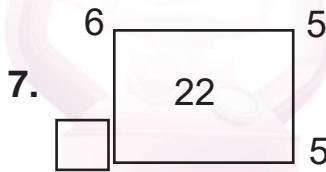
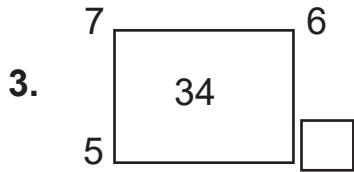
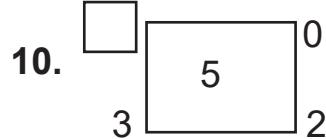
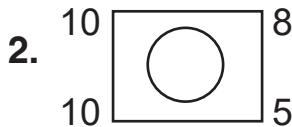
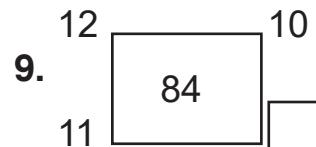
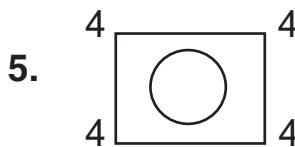
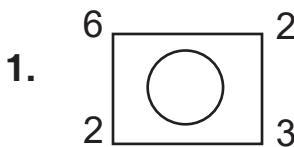


Exercise 7b



Date:

Example:



Example:

$$8 \times 4 \rightarrow Z = \boxed{38}$$

$$10 \times \boxed{10} \rightarrow Z = 106$$

$$9 \times 6 \rightarrow Z = \boxed{60}$$

$$\boxed{5} \times 5 \rightarrow Z = 31$$

1. $50 \times 5 \rightarrow Z =$ 11. $13 \times 9 \rightarrow Z =$
2. $60 \times \boxed{} = Z \rightarrow 366$ 12. $25 \times 10 \rightarrow Z =$
3. $8 \times 9 \rightarrow Z =$ 13. $21 \times \boxed{} \rightarrow Z = 69$
4. $54 \times 6 \rightarrow Z =$ 14. $90 \times 10 \rightarrow Z =$
5. $12 \times \boxed{} \rightarrow Z = 90$ 15. $\boxed{} \times 5 \rightarrow Z = 106$
6. $21 \times 11 \rightarrow Z =$ 16. $13 \times 7 \rightarrow Z =$
7. $\boxed{} \times 6 \rightarrow Z = 78$ 17. $21 \times 3 \rightarrow Z =$
8. $15 \times \boxed{} \rightarrow Z = 81$ 18. $100 \times \boxed{} \rightarrow Z = 106$
9. $20 \times 7 \rightarrow Z =$ 19. $16 \times 7 \rightarrow Z =$
10. $32 \times \boxed{} \rightarrow Z = 134$ 20. $\boxed{} \times 4 \rightarrow Z = 126$



Exercise 8a

Date:



Example:

$$6 \times 3 \xrightarrow{2} Z = \boxed{9}$$

$$12 \times \boxed{5} \xrightarrow{2} Z = 30$$

$$\boxed{10} \times 5 \xrightarrow{2} Z = 25$$

$$1. 8 \times 10 \xrightarrow{2} Z = \boxed{}$$

$$11. 42 \times 9 \xrightarrow{2} Z = \boxed{}$$

$$2. 12 \times \boxed{} \xrightarrow{2} Z = 30$$

$$12. 72 \times 4 \xrightarrow{2} Z = \boxed{}$$

$$3. 14 \times 3 \xrightarrow{2} Z = \boxed{}$$

$$13. \boxed{} \times 2 \xrightarrow{2} Z = 45$$

$$4. 25 \times \boxed{} \xrightarrow{2} Z = 50$$

$$14. 23 \times 6 \xrightarrow{2} Z = \boxed{}$$

$$5. 18 \times \boxed{} \xrightarrow{2} Z = 90$$

$$15. 66 \times 4 \xrightarrow{2} Z = \boxed{}$$

$$6. \boxed{} \times 8 \xrightarrow{2} Z = 36$$

$$16. 100 \times \boxed{} \xrightarrow{2} = 500$$

$$7. 35 \times 3 \xrightarrow{2} Z = \boxed{}$$

$$17. \boxed{} \times 8 \xrightarrow{2} Z = 48$$

$$8. 32 \times 6 \xrightarrow{2} Z = \boxed{}$$

$$18. 16 \times \boxed{} \xrightarrow{2} = 40$$

$$9. \boxed{} \times 60 \xrightarrow{2} Z = 0$$

$$19. 24 \times 5 \xrightarrow{2} Z = \boxed{}$$

$$10. 13 \times \boxed{} \xrightarrow{2} Z = 65$$

$$20. \boxed{} \times 3 \xrightarrow{2} Z = 105$$



NEW EDITION

Score: _____

21

**Example:**

2

4

16

8

64

4096

1.

3

9

4.

4

16

2.

5

25

5.

7

49

3.

10

100

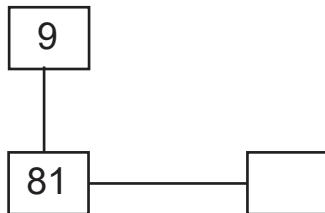
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6

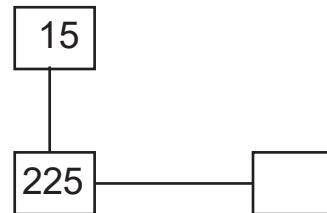
36



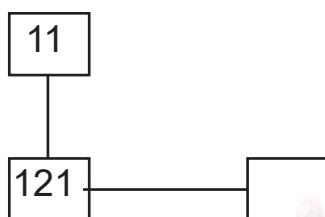
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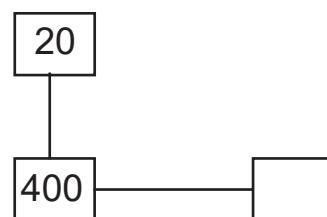
9.



8.



10.



**Example:**

1.

8 → a → 14 → **mixer** → 4 → 1 → b
2.

c → 36 → 44 → **mixer** → 5 → 9 → d
3.

60 → 80 → e → **mixer** → f → 8 → 10
4.

72 → g → 132 → **mixer** → 6 → 8 → h
5.

i → 2 → 5 → **mixer** → 1 → j → 5



Exercise 9a



Date:

Example:



0	1	2	3	4	5	6	7	8	9
a	b	c	d	e	f	g	h	i	j
ca	=	20		eh	=	47			
98	=	ji		50	=	fa			

1. bj = _____ 11. caj = _____
2. 29 = _____ 12. 339 = _____
3. fh = _____ 13. 440 = _____
4. 709 = _____ 14. eea = _____
5. bcd = _____ 15. fhj = _____
6. daj = _____ 16. 110 = _____
7. 711 = _____ 17. dga = _____
8. bai = _____ 18. 608 = _____
9. 900 = _____ 19. hefj = _____
10. baa = _____ 20. iace = _____



Exercise 9b



Date:

Example:



0	1	2	3	4	5	6	7	8	9
a	b	c	d	e	f	g	h	i	j

dad = 303 466 = egg

- | | |
|-----------------|------------------|
| 1. big = _____ | 11. beef = _____ |
| 2. 543 = _____ | 12. 7834 = _____ |
| 3. fig = _____ | 13. high = _____ |
| 4. 201 = _____ | 14. cafe = _____ |
| 5. bag = _____ | 15. 1445 = _____ |
| 6. 143 = _____ | 16. 303 = _____ |
| 7. had = _____ | 17. had = _____ |
| 8. 3403 = _____ | 18. 581 = _____ |
| 9. deaf = _____ | 19. 783 = _____ |
| 10. 181 = _____ | 20. head = _____ |



Exercise 10a



Date:

Example:



0 1 2 3 4 5 6 7 8 9

→ a b c d e f g h i j

$$ca + eh = 20 + 47$$

$$gi - f = 68 - 5$$

$$49 \div 7 = ej \div h$$

$$20 \times 5 = ca \times f$$

1. $cb + ef =$ _____

11. $56 \div 2 =$ _____

2. $gj - da =$ _____

12. $49 + 10 =$ _____

3. $f \times j =$ _____

13. $80 + 9 =$ _____

4. $a + i =$ _____

14. $9 \times 0 =$ _____

5. $fg \div c =$ _____

15. $15 - 2 =$ _____

6. $jj + b =$ _____

16. $15 \times 4 =$ _____

7. $ba \times f =$ _____

17. $77 + 18 =$ _____

8. $dd \div b =$ _____

18. $56 - 21 =$ _____

9. $cc \times e =$ _____

19. $90 - 70 =$ _____

10. $ha - b =$ _____

20. $45 \div 6 =$ _____



**Example:**

If X A B Y L M Z E F
represents 9 1 4 2 5 6 7 8 3
then 428 means BYE
And MAZE = 6178

1. 3885 = _____ 11. 312 = _____
2. _____ = LAZY 12. MALE = _____
3. 386158 = _____ 13. 4816 = _____
4. 4883 = _____ 14. AXE = _____
5. _____ = BALL 15. 512 = _____
6. FEEBLE = _____ 16. _____ = 4855
7. ZEAL = _____ 17. 412 = _____
8. 3855 = _____ 18. LAMB = _____
9. MAY = _____ 19. YAM = _____
10. 5813 = _____ 20. _____ = 319

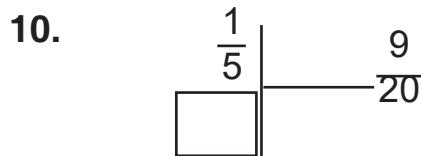
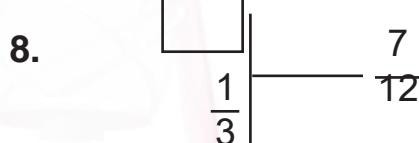
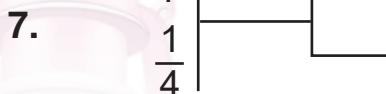
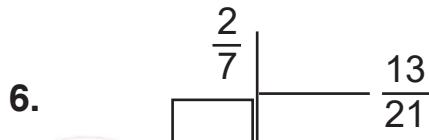
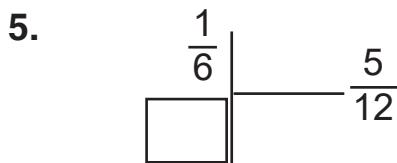
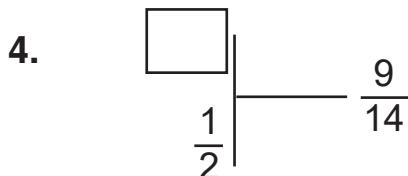
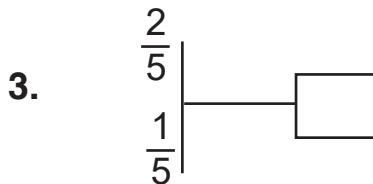
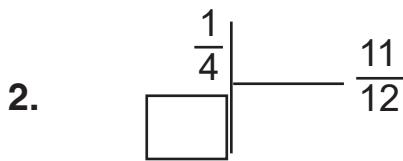
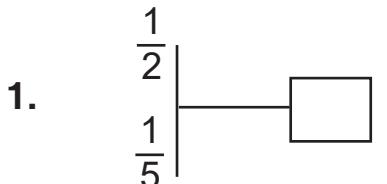
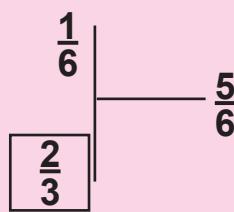
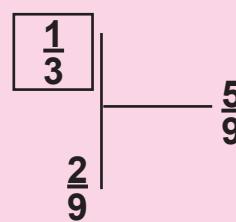
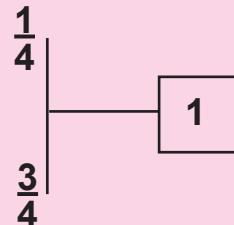


Exercise 11a



Date:

Example:

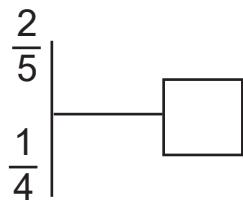


NEW EDITION

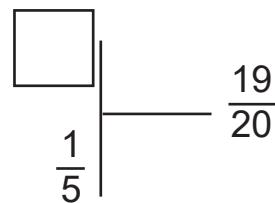
Score:

29

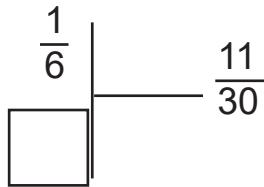
11.



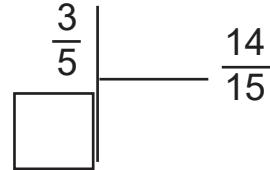
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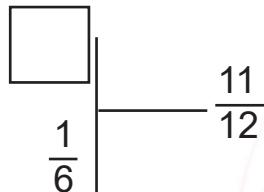
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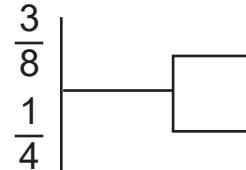
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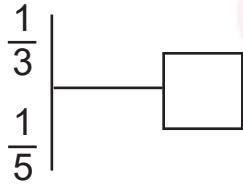
13.



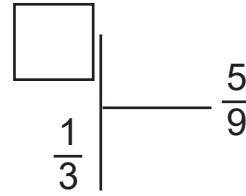
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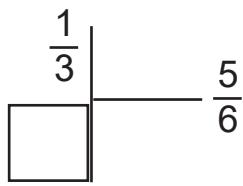
14.



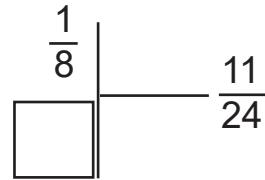
19.



15.



20.



Exercise 11b



Date:

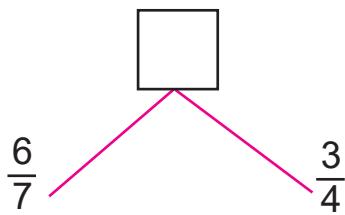
Example:



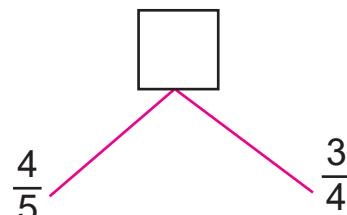
1. $\frac{2}{3}$ is shown as the sum of $\frac{1}{2}$ and $\frac{1}{3}$.
2. $\frac{3}{4}$ is shown as the sum of $\frac{1}{3}$ and $\frac{1}{4}$.
3. $\frac{1}{2}$ is shown as the sum of $\frac{2}{5}$ and $\frac{1}{5}$.
4. $\frac{3}{4}$ is shown as the sum of $\frac{3}{5}$ and $\frac{1}{4}$.
5. $\frac{2}{3}$ is shown as the sum of $\frac{3}{7}$ and $\frac{1}{7}$.
6. $\frac{1}{2}$ is shown as the sum of $\frac{1}{5}$ and $\frac{1}{10}$.
7. $\frac{1}{4}$ is shown as the sum of $\frac{1}{5}$ and $\frac{1}{20}$.
8. $\frac{4}{5}$ is shown as the sum of $\frac{1}{2}$ and $\frac{1}{10}$.
9. $\frac{3}{4}$ is shown as the sum of $\frac{1}{6}$ and $\frac{1}{3}$.
10. $\frac{5}{6}$ is shown as the sum of $\frac{3}{4}$ and $\frac{1}{12}$.



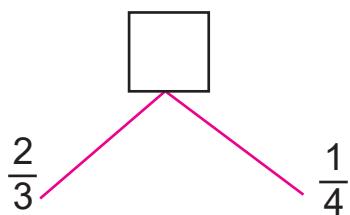
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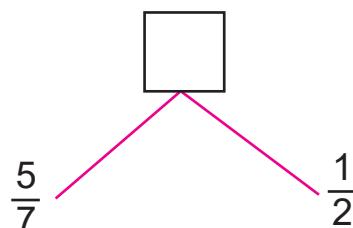
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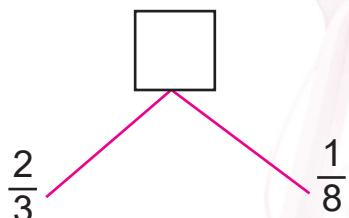
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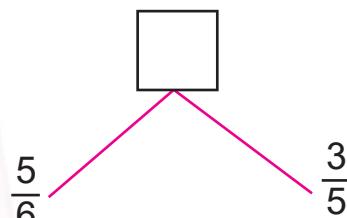
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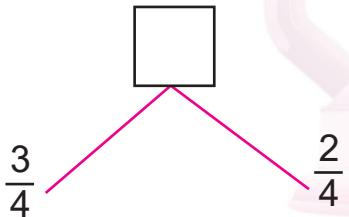
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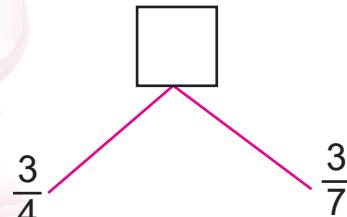
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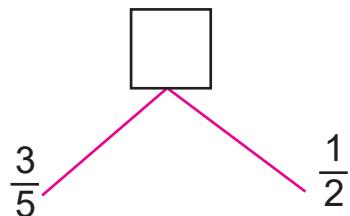
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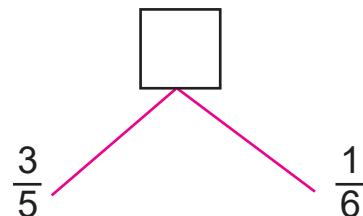
19.



15.



20.

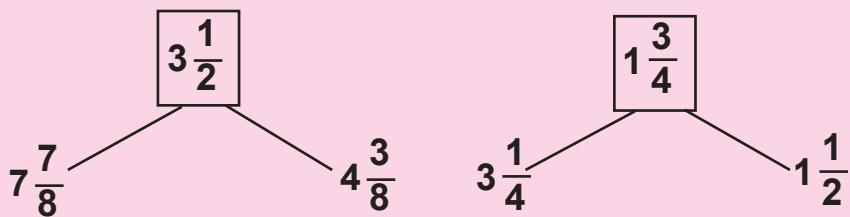


Exercise 11c



Date:

Example:



1. $3\frac{1}{2}$ 5. $2\frac{3}{4}$
2. $3\frac{1}{4}$ 6. $1\frac{1}{6}$
3. $1\frac{1}{8}$ 7. $3\frac{5}{8}$
4. $2\frac{5}{8}$ 8. $3\frac{5}{6}$
- Each number has a line connecting it to a square box above it, which then branches into two lines leading to two smaller square boxes below it.

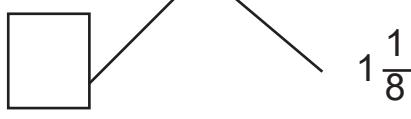


NEW EDITION

Score:

33

9. $2\frac{3}{8}$

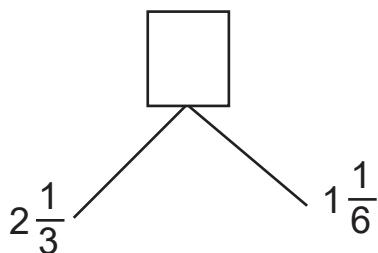


14.

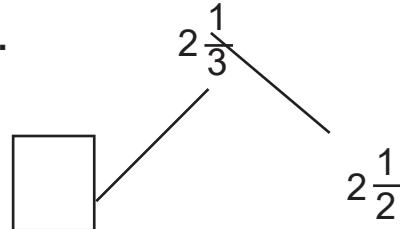


$$5\frac{1}{2} \quad 2\frac{1}{6}$$

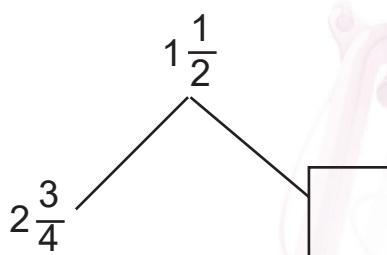
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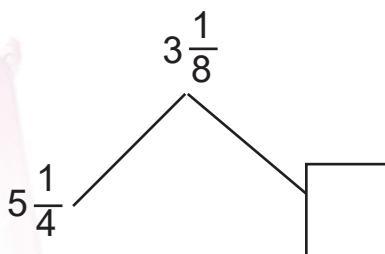
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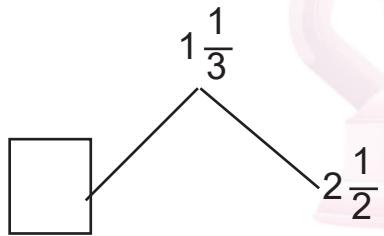
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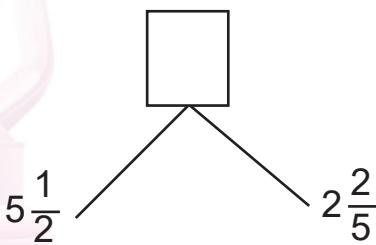
16.



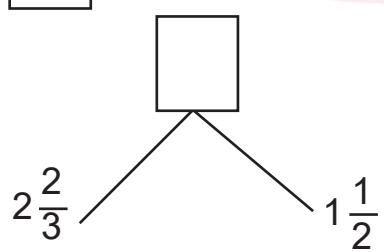
12.



17.



13.



18.



Exercise 12a

Date:



Example:



$$5 + 4$$

$$\triangle$$

$$3 \times 3$$

$$24 - 4$$

$$\triangle$$

$$4 \times 5$$

1.

$$20 + \boxed{}$$

$$\triangle$$

$$5 \times 7$$

6.

$$144 \div \boxed{}$$

$$\triangle$$

$$3 \times 4$$

2.

$$30 - 6$$

$$\triangle$$

$$96 \div \boxed{}$$

7.

$$\boxed{} \times 32$$

$$\triangle$$

$$8 \times 8$$

3.

$$100 \div \boxed{}$$

$$\triangle$$

$$2 \times 5$$

8.

$$20 - 20$$

$$\triangle$$

$$\boxed{} \times 20$$

4.

$$4 \times \boxed{}$$

$$\triangle$$

$$50 + 10$$

9.

$$40 \div \boxed{}$$

$$\triangle$$

$$2 \times 2$$

5.

$$3 \times 3$$

$$\triangle$$

$$\boxed{} \div 9$$

10.

$$75 - 50$$

$$\triangle$$

$$125 \div \boxed{}$$



NEW EDITION

Score:

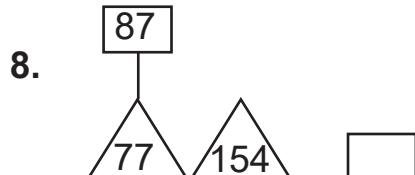
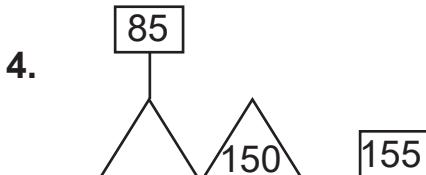
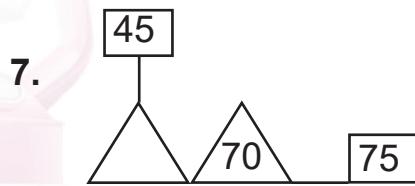
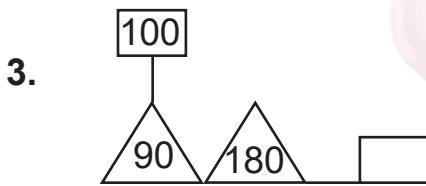
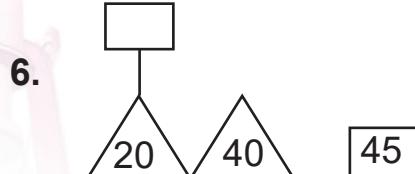
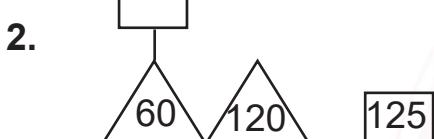
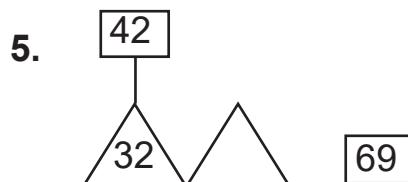
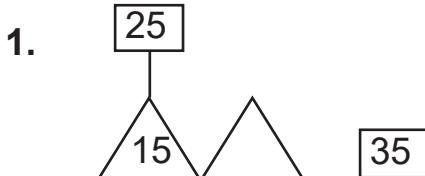
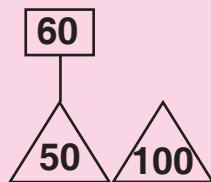
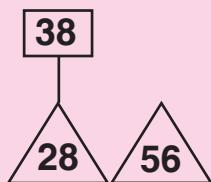
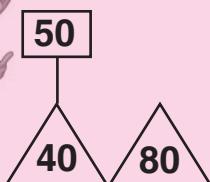
35

Exercise 12b

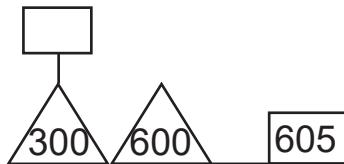


Date:

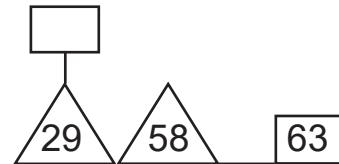
Example:



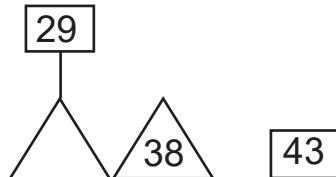
9.



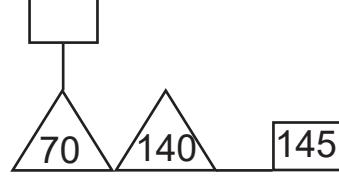
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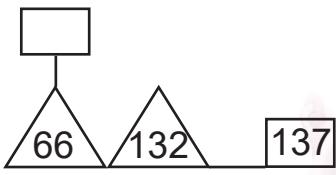
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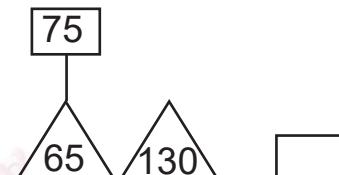
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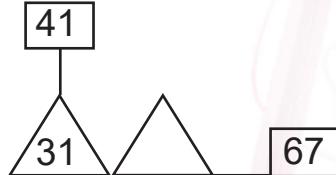
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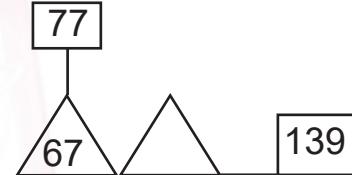
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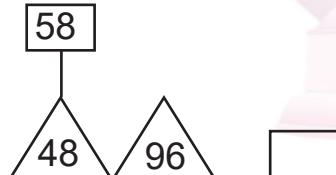
12.



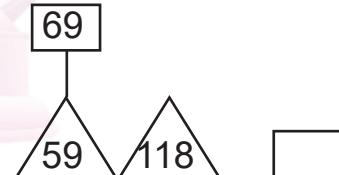
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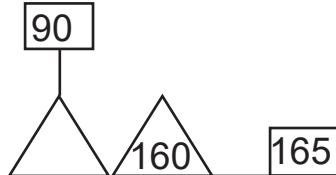
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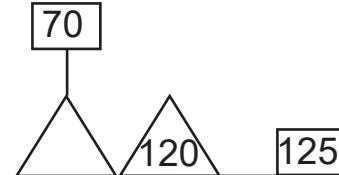
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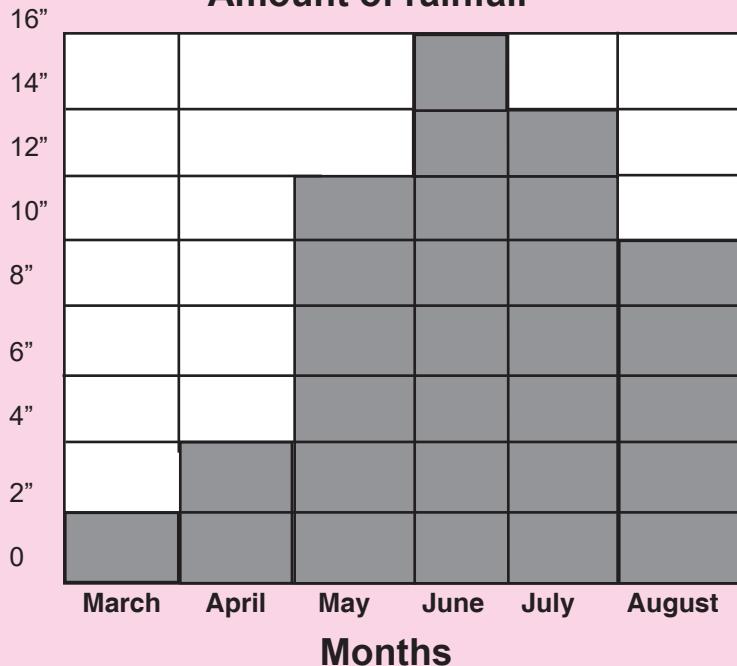


14.



20.



Example:**Rainfall measured in inches****Amount of rainfall**

- The graph shows the _____ of rainfall.
- In which month is the rain heaviest? _____
- When does it rain the least? _____
- How many inches of rainfall is in March? _____
- How many inches of rainfall is in June? _____
- Which two months did it rain the heaviest? _____
- The least rainfall is _____ inches.
- In May the rainfall is _____ inches.
- In what months is the rainfall between 4 inches and 10 inches? _____ and _____.
- What is the difference between the rainfall in June and March? _____



Example:***Study each number pattern and fill each box:***

1. 2, 3, 5, 8, 12, , 23, 30.

2. 93, 89, , 81, 77, 73.

3. 2, 3, 5, 6, 8, 9, 11, 12, ,
15, 17, 18.

4. 5, 15, 25, 35, , 55, 65.

5. 7, 14, 21, , 35, 42.

6. 1, 6, 11, 16, , 26.

7. 32, 16, 8, , 2, 1.

8. 120, 100, 80, , 40.

9. 2, 4, 6, , 10, 12.

10. 3, 6, 5, 10, 7, 14, , 18.

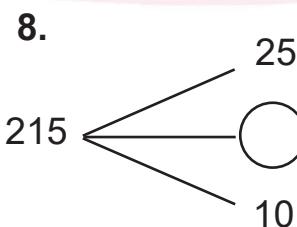
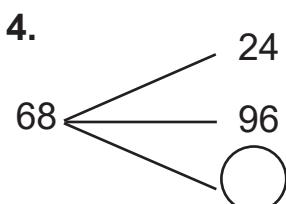
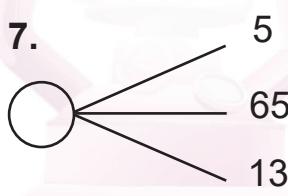
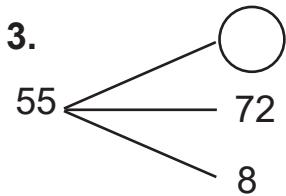
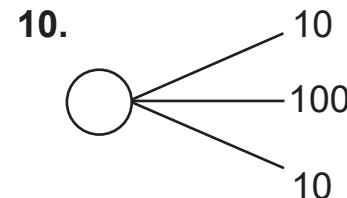
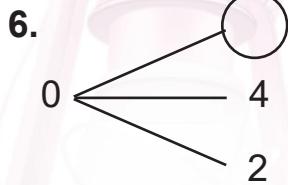
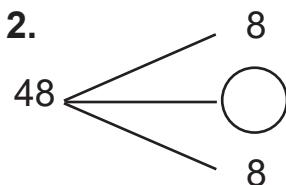
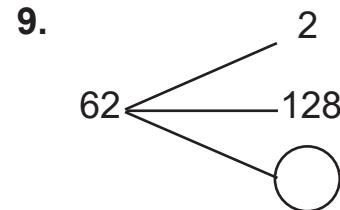
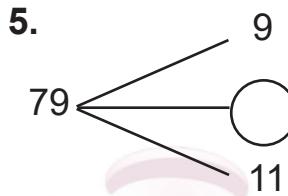
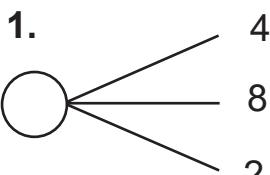
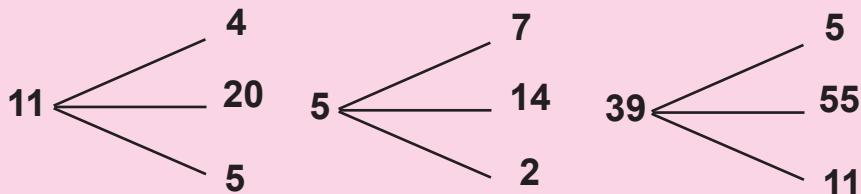


Exercise 14a



Date:

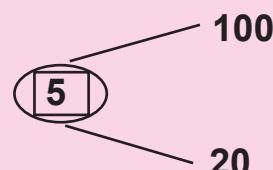
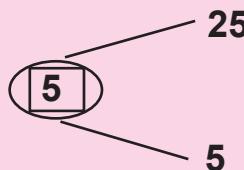
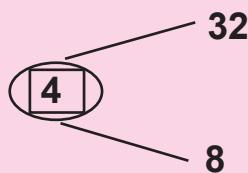
Example:



Exercise 14b

Date:

Example:



1. 36
4

2. 25

3. 91
7

4. 108

5. 9

6.
9
64

7. 8
33

8.
78

9. 3

10. 8



Exercise 14c

1 2 3 4 5 6 7 8 9

Date:



Example:

20

400

8

64

16

256

1.

36

6.

169

2.

9

7.

484

3.

144

8.

11

4.

15

9.

7

5.

19

10.

100



Exercise 15a



Date:

Example:



1. $56 \longrightarrow \textcircled{7} \longrightarrow \boxed{}$

6. $10 \longrightarrow \textcircled{7} \longrightarrow \boxed{}$

2. $25 \longrightarrow \boxed{} \longrightarrow 10$

7. $3 \longrightarrow \boxed{} \longrightarrow 0$

3. $\boxed{} \longrightarrow \textcircled{19} \longrightarrow 18$

8. $92 \longrightarrow \textcircled{24} \longrightarrow \boxed{}$

4. $43 \longrightarrow \boxed{} \longrightarrow 13$

9. $\boxed{} \longrightarrow \textcircled{21} \longrightarrow 100$

5. $\boxed{} \longrightarrow 1 \longrightarrow 19$

10. $21 \longrightarrow \boxed{} \longrightarrow 11$



NEW EDITION

Score:

43

Exercise 15b



Date:

Example:



4	2	3	2	2	6
8	5	4	7	3	28
13	8	1	6	5	6

1. 12 $\boxed{4 \quad 7 \quad 2 \quad 8}$ $\boxed{\quad}$ 6. 1 $\boxed{\quad} \frac{1}{2} \frac{1}{2} \frac{1}{2} \frac{1}{4}$

2. 15 $\boxed{13 \quad 12 \quad 0 \quad 2}$ $\boxed{\quad}$ 7. $\boxed{\quad} \boxed{16 \quad 4 \quad 6 \quad 4} \quad 24$

3. $\boxed{\quad} \boxed{3 \quad 3 \quad 3 \quad 3} \quad 9$ 8. 21 $\boxed{13 \quad 5 \quad 13 \quad 8} \quad \boxed{\quad}$

4. 24 $\boxed{20 \quad \boxed{\quad} \quad 8 \quad 4}$ 32 9. $\boxed{\quad} \boxed{6 \quad \boxed{\quad} \quad 9 \quad 14} \quad 81$

5. 8 $\boxed{5 \quad 6 \quad 2 \quad \boxed{\quad}}$ 12 10. 61 $\boxed{60 \quad 1 \quad 1 \quad \boxed{\quad}} \quad 1$

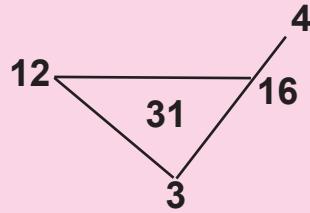
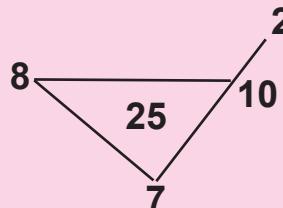


Exercise 15c



Date:

Example:



1.
$$\begin{array}{c} 10 \\ \backslash \quad / \\ 25 \quad 15 \\ \backslash \quad / \\ \boxed{} \quad 5 \end{array}$$
2.
$$\begin{array}{c} 6 \\ \backslash \quad / \\ 22 \quad 12 \\ \backslash \quad / \\ 4 \quad \boxed{} \end{array}$$
3.
$$\begin{array}{c} 40 \\ \backslash \quad / \\ \boxed{} \quad 60 \\ \backslash \quad / \\ 20 \quad 13 \end{array}$$
4.
$$\begin{array}{c} \boxed{} \\ \backslash \quad / \\ 25 \quad 7 \\ \backslash \quad / \\ 44 \quad \boxed{} \end{array}$$
5.
$$\begin{array}{c} 2 \\ \backslash \quad / \\ 18 \quad 8 \\ \backslash \quad / \\ 6 \quad \boxed{} \end{array}$$
6.
$$\begin{array}{c} \boxed{} \\ \backslash \quad / \\ 180 \quad 40 \\ \backslash \quad / \\ 20 \quad 80 \end{array}$$
7.
$$\begin{array}{c} 27 \\ \backslash \quad / \\ \boxed{} \quad 54 \\ \backslash \quad / \\ 6 \end{array}$$
8.
$$\begin{array}{c} 0 \\ \backslash \quad / \\ 38 \quad 19 \\ \backslash \quad / \\ 19 \quad \boxed{} \end{array}$$
9.
$$\begin{array}{c} 6 \\ \backslash \quad / \\ 53 \quad 18 \\ \backslash \quad / \\ \boxed{} \quad 12 \end{array}$$
10.
$$\begin{array}{c} 15 \\ \backslash \quad / \\ 62 \quad 12 \\ \backslash \quad / \\ 20 \quad \boxed{} \end{array}$$



Exercise 15d



Date:

Example:



$$\begin{pmatrix} 3 & 5 \\ 7 & 1 \end{pmatrix} Z \begin{pmatrix} 2 & 1 \\ 4 & 0 \end{pmatrix} = \begin{pmatrix} 6 & 5 \\ 28 & 0 \end{pmatrix}$$

$$1. \begin{pmatrix} 6 & \square \\ 2 & 4 \end{pmatrix} Z \begin{pmatrix} \square & 3 \\ \square & 5 \end{pmatrix} = \begin{pmatrix} 12 & 9 \\ 20 & \square \end{pmatrix}$$

$$2. \begin{pmatrix} 12 & 5 \\ 7 & \square \end{pmatrix} Z \begin{pmatrix} 5 & \square \\ \square & 9 \end{pmatrix} = \begin{pmatrix} \square & 0 \\ 14 & 45 \end{pmatrix}$$

$$3. \begin{pmatrix} \square & 11 \\ \frac{1}{2} & 2 \end{pmatrix} Z \begin{pmatrix} 3 & 4 \\ \square & 15 \end{pmatrix} = \begin{pmatrix} 15 & \square \\ \frac{1}{4} & \square \end{pmatrix}$$

$$4. \begin{pmatrix} 25 & \square \\ \frac{1}{3} & 2 \end{pmatrix} Z \begin{pmatrix} 10 & 2 \\ \square & 5 \end{pmatrix} = \begin{pmatrix} \square & 2 \\ \frac{1}{3} & \square \end{pmatrix}$$

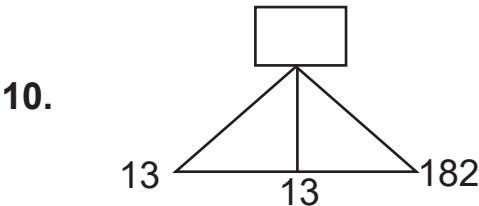
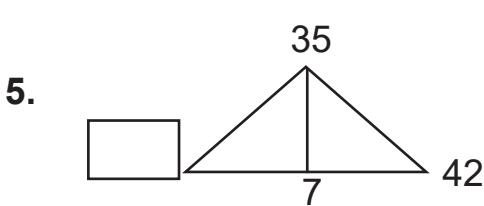
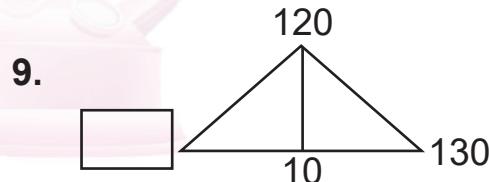
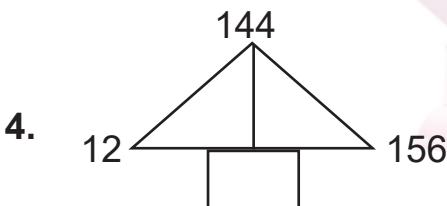
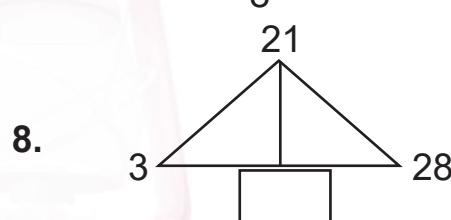
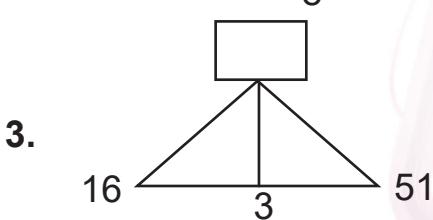
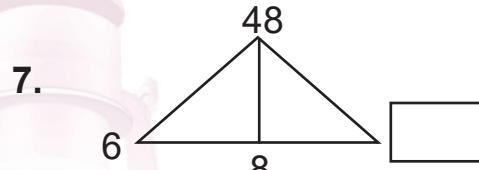
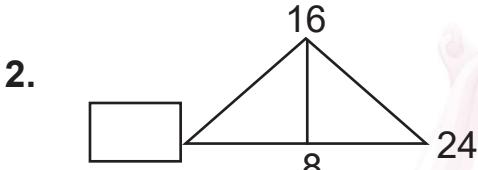
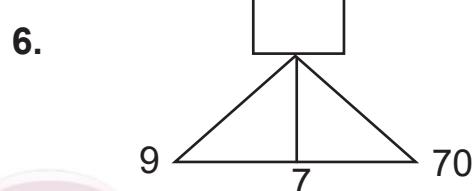
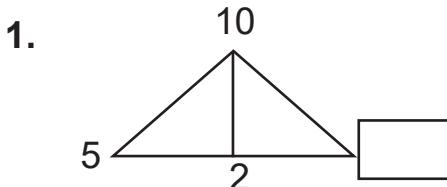
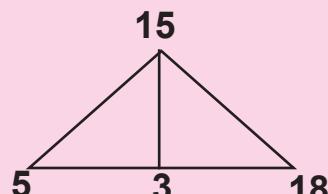
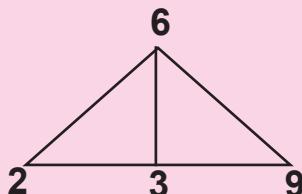


Exercise 16a



Date:

Example:

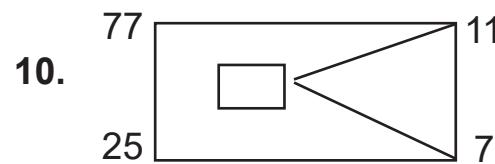
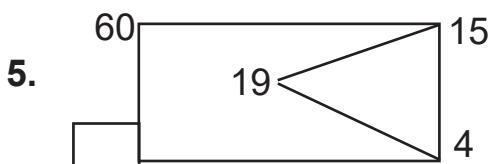
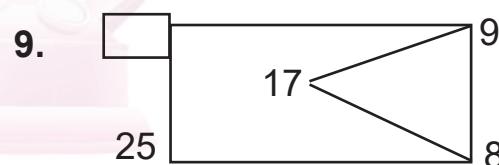
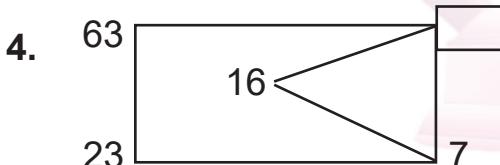
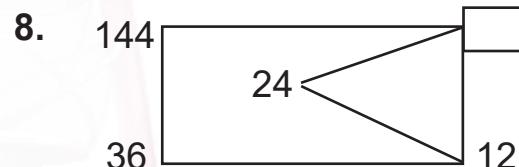
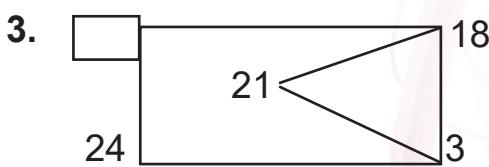
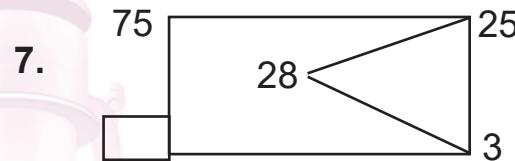
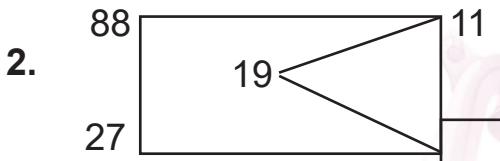
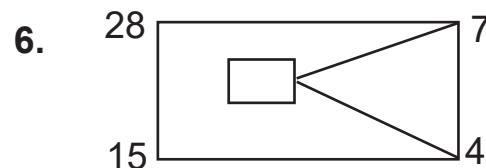
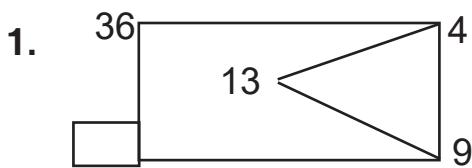
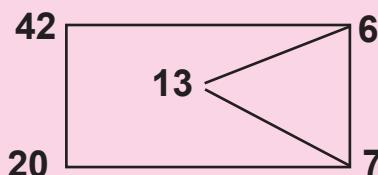
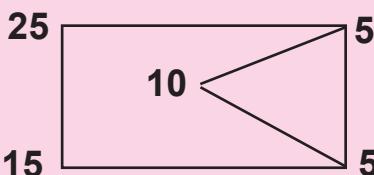


Exercise 16b



Date:

Example:



Example:

If B R E A K I N G and $\frac{A}{R} = \frac{4}{2} = 2$

1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---

Then do these:

1. K E + I N = 6. A K - = 22

2. $\frac{B R}{I} = \boxed{}$ 7. G ÷ A = ÷ E

3. = 1 2 3 4 5 8. $\frac{I A}{R \times A} = \boxed{}$

4. R x G = 9. K I N G - B E A K =

5. R A K E = 10. B x A x R =

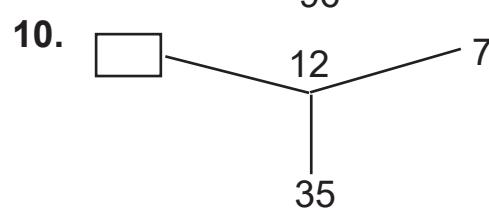
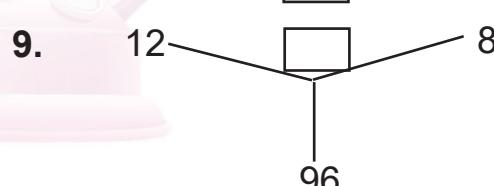
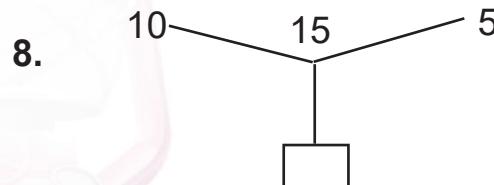
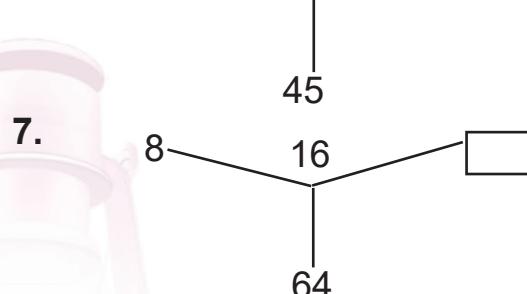
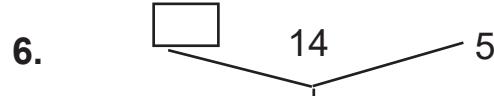
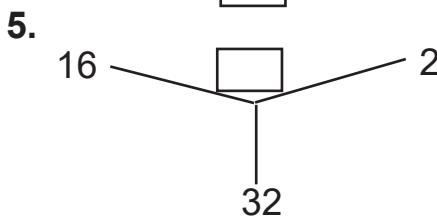
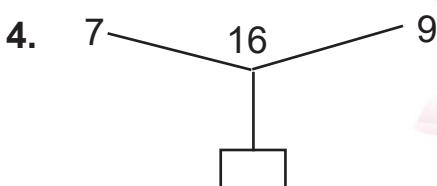
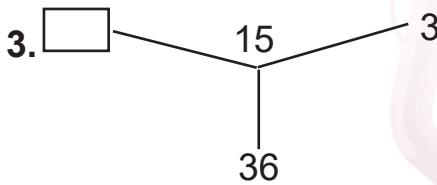
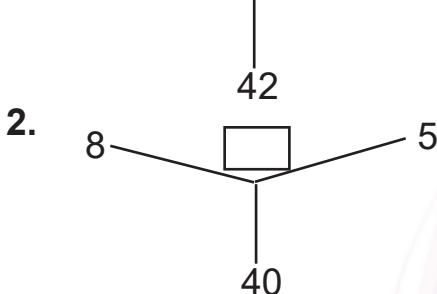
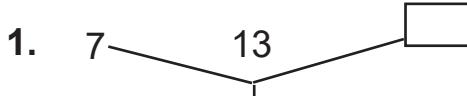
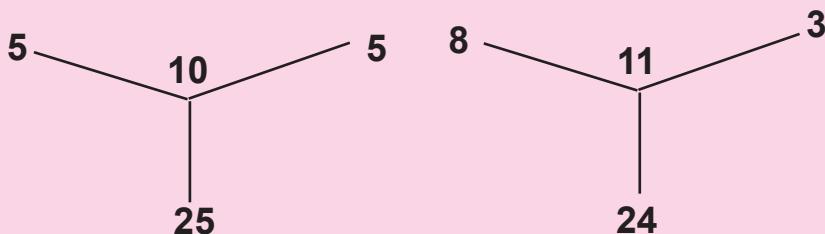


Exercise 17a



Date:

Example:

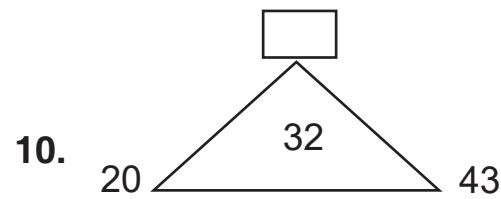
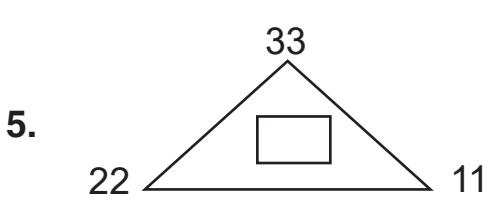
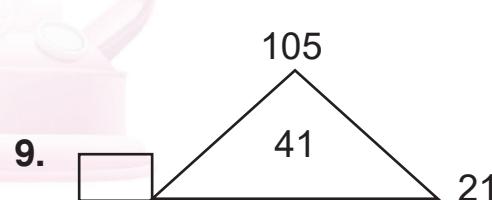
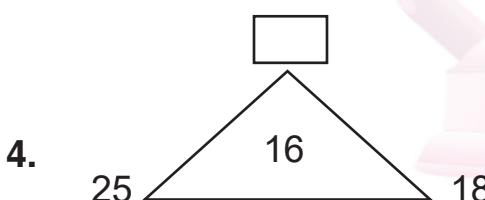
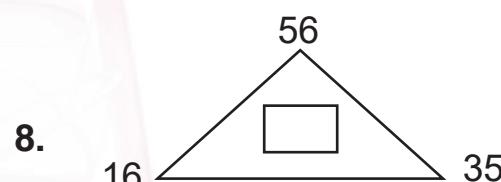
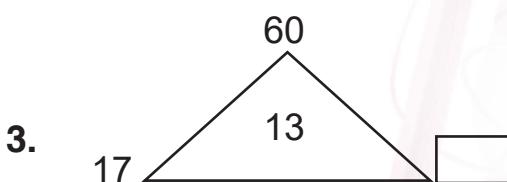
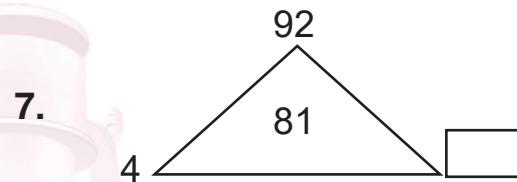
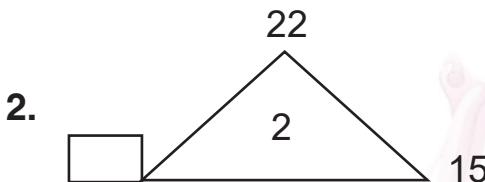
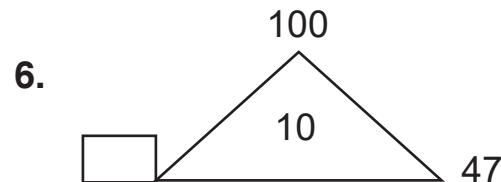
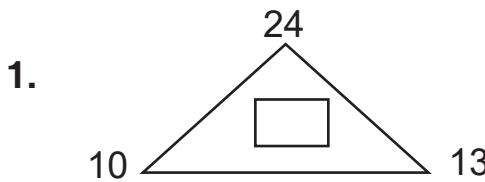
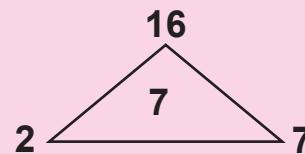
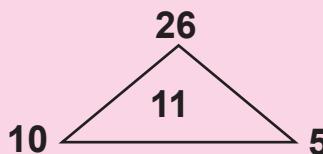


Exercise 17b



Date:

Example:

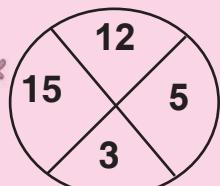


Exercise 17c

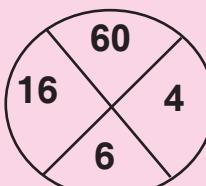


Date:

Example:



$$= 4 - 3 = 1$$



$$= 10 - 4 = 6$$

1. $= \boxed{\quad} - 3 = 1$

6. $= 6 - \boxed{\quad} = \boxed{\quad}$

2. $= 10 - 8 = 2$

7. $= \boxed{\quad} - 3 = \boxed{\quad}$

3. $= 6 - 3 = 3$

8. $= 1 - \boxed{\quad} = \boxed{\quad}$

4. $= 9 - 7 = 2$

9. $= \boxed{\quad} - 10 = \boxed{\quad}$

5. $= \boxed{\quad} - 1 = \boxed{\quad}$

10. $= 5 - \boxed{\quad} = \boxed{\quad}$



Exercise 17d

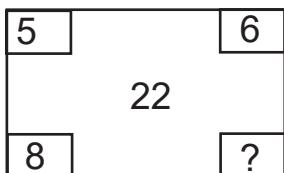


Date:

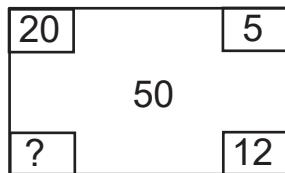
Example:



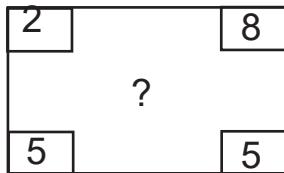
1.



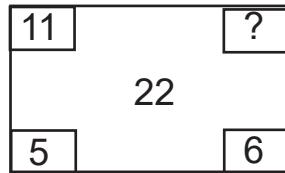
6.



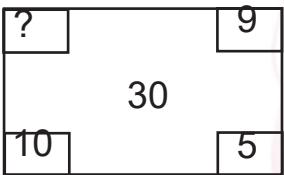
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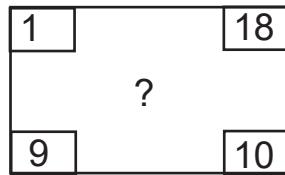
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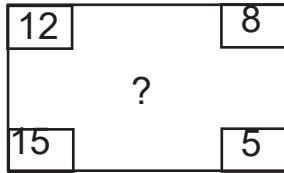
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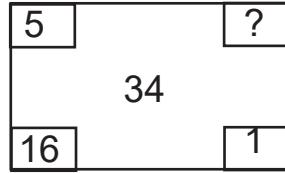
8.



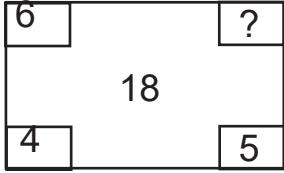
4.



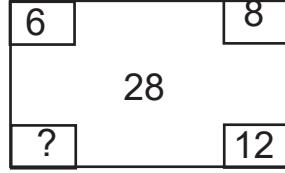
9.



5.



10.



NEW EDITION

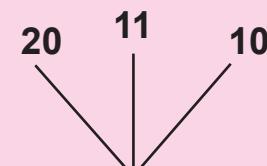
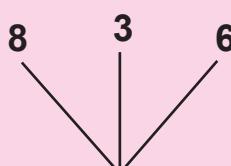
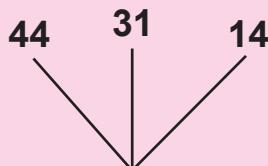
Score: _____

Exercise 18a

Date:



Example:



1. 72 18
2. 35 16
3. 11 30
4. 55 23
5. 81 81
6. 77 24
7. 43 4
8. 3 17
9. 62 25
10. 21 100

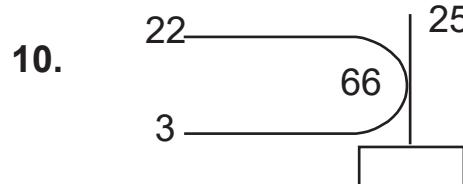
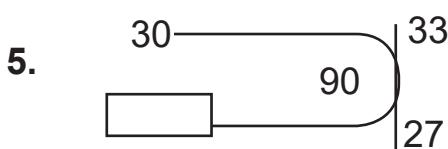
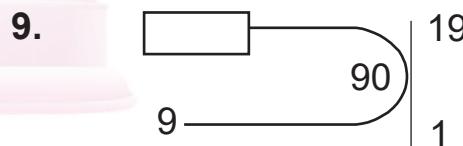
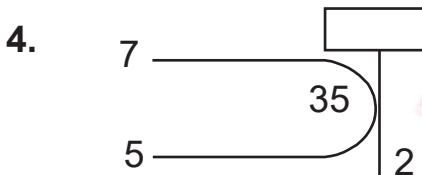
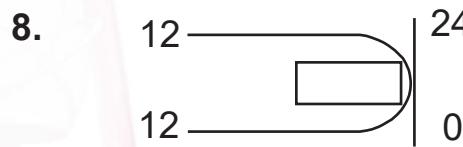
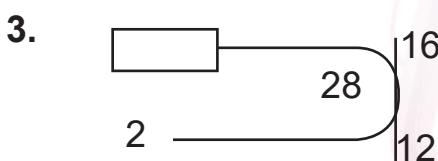
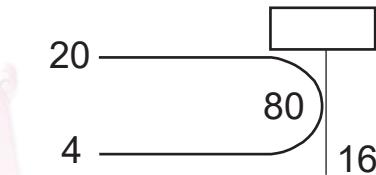
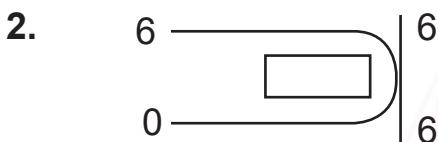
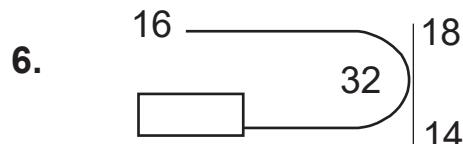
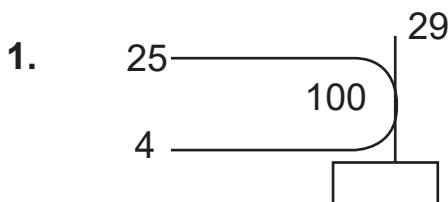


Exercise 18b



Date:

Example:



**Example:**

$$12 \text{ d } 3 = \frac{12 \times 3}{2} = 18$$

$$6 \text{ d } 4 = \frac{6 \times 4}{2} = 12$$

$$7 \text{ d } 6 = \frac{7 \times 6}{2} = 21$$

1. $6 \text{ d } 5 = \boxed{}$

6. $\boxed{} \text{ d } 5 = 20$

2. $\boxed{} \text{ d } 9 = 36$

7. $24 \text{ d } 2 = \boxed{}$

3. $10 \text{ d } \boxed{} = 50$

8. $9 \text{ d } \boxed{} = 27$

4. $18 \text{ d } 3 = \boxed{}$

9. $15 \text{ d } 4 = \boxed{}$

5. $20 \text{ d } \boxed{} = 50$

10. $\boxed{} \text{ d } 8 = 32$

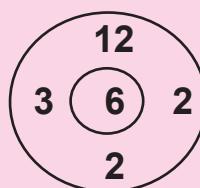
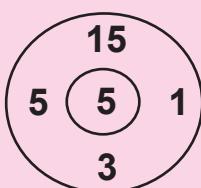
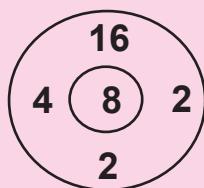


Exercise 18d

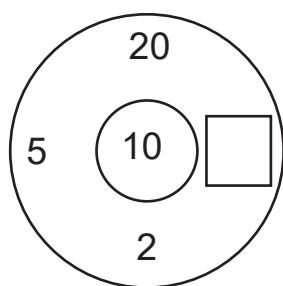


Date:

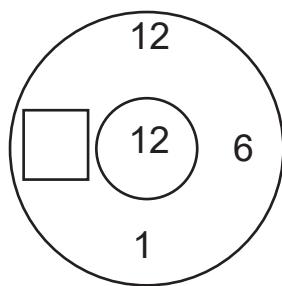
Example:



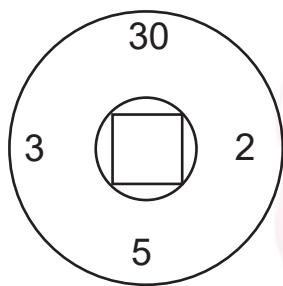
1.



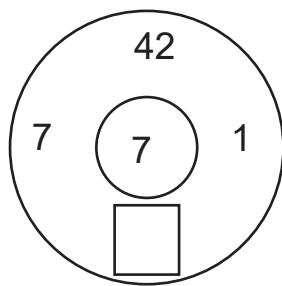
4.



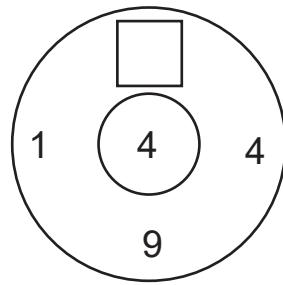
2.



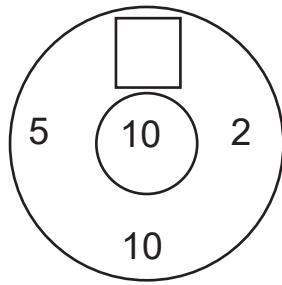
5.



3.



6.

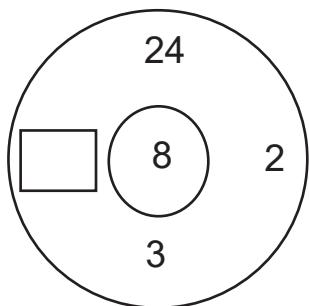


NEW EDITION

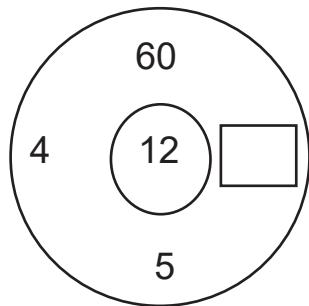
Score:

57

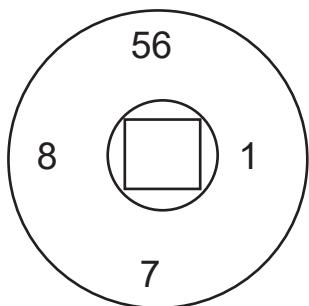
7.



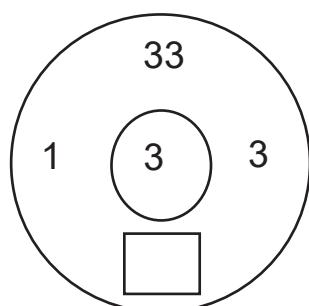
11.



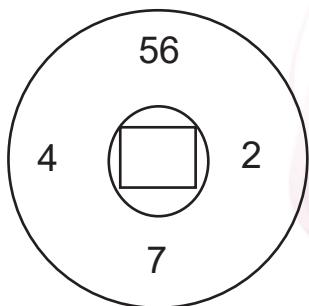
8.



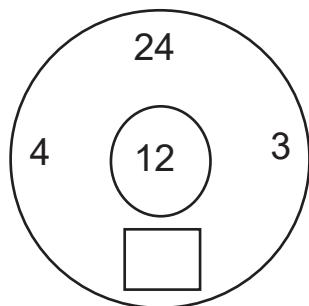
12.



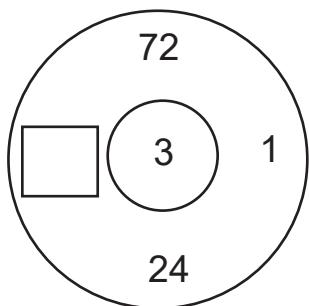
9.



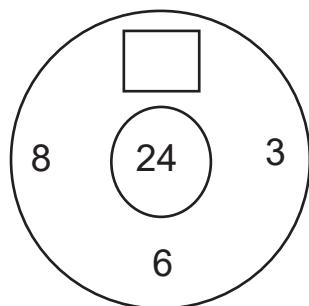
13.



10.



14.

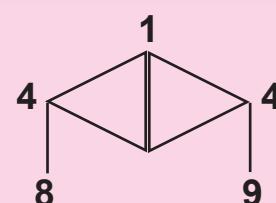
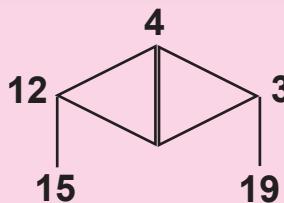
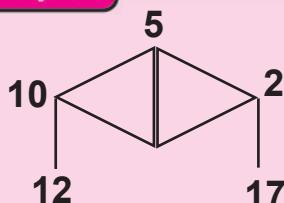


Exercise 19a



Date:

Example:



- 1.
-
- 5.
-
- 9.
-
- 2.
-
- 6.
-
- 10.
-
- 3.
-
- 7.
-
- 4.
-
- 8.
-

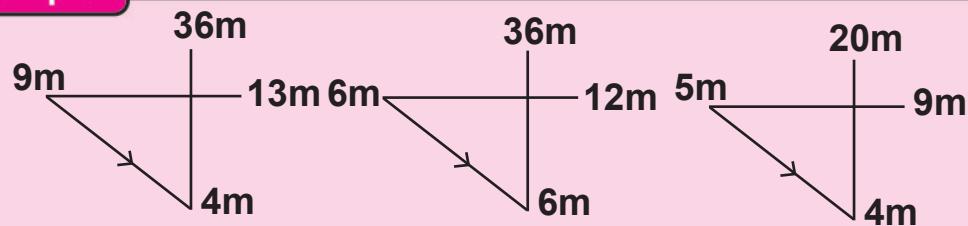


Exercise 19b



Date:

Example:



- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.



Exercise 19c



Date:

Example:



$$\begin{array}{ccc} 2 & & 32 \\ & \swarrow & \downarrow \\ 4 & & 8 \end{array} = 18$$

$$\begin{array}{ccc} 5 & & 180 \\ & \swarrow & \downarrow \\ 6 & & 30 \end{array} = 139$$

1.

$$\begin{array}{ccc} 4 & & 36 \\ & \swarrow & \downarrow \\ \boxed{} & & 12 \end{array} = 17$$

6.

$$\begin{array}{ccc} \boxed{} & & 64 \\ & \downarrow & \swarrow \\ 4 & & 16 \end{array} = 40$$

2.

$$\begin{array}{ccc} 6 & & 54 \\ & \swarrow & \downarrow \\ 3 & & 18 \end{array} = \boxed{}$$

7.

$$\begin{array}{ccc} 9 & & 36 \\ & \swarrow & \downarrow \\ \boxed{} & & 18 \end{array} = 7$$

3.

$$\begin{array}{ccc} 5 & & \boxed{} \\ & \swarrow & \downarrow \\ 5 & & 25 \end{array} = 90$$

8.

$$\begin{array}{ccc} 3 & & 147 \\ & \swarrow & \downarrow \\ 7 & & 21 \end{array} = \boxed{}$$

4.

$$\begin{array}{ccc} 4 & & 100 \\ & \swarrow & \downarrow \\ 5 & & 20 \end{array} = \boxed{}$$

9.

$$\begin{array}{ccc} 5 & & 45 \\ & \swarrow & \downarrow \\ 3 & & \boxed{} \end{array} = 22$$

5.

$$\begin{array}{ccc} 5 & & 245 \\ & \swarrow & \downarrow \\ 7 & & 35 \end{array} = \boxed{}$$

10.

$$\begin{array}{ccc} 15 & & 240 \\ & \swarrow & \downarrow \\ 4 & & 60 \end{array} = \boxed{}$$



Exercise 19d



Date:

Example:



$$\begin{array}{c} \rightarrow \\ 10 - 2 - 20 \\ \downarrow \\ 15 \end{array}$$

$$\begin{array}{c} \rightarrow \\ 6 - 3 - 18 \\ \downarrow \\ 8 \end{array}$$

11.

$$\begin{array}{c} \rightarrow \\ 4 - \square - 8 \\ \downarrow \\ 6 \end{array}$$

16.

$$\begin{array}{c} \rightarrow \\ 7 - 7 - 49 \\ \downarrow \\ \square \end{array}$$

12.

$$\begin{array}{c} \rightarrow \\ 6 - 1 - \square \\ \downarrow \\ 12 \end{array}$$

17.

$$\begin{array}{c} \rightarrow \\ 8 - \square - 16 \\ \downarrow \\ 12 \end{array}$$

13.

$$\begin{array}{c} \rightarrow \\ \square - 5 - 25 \\ \downarrow \\ 6 \end{array}$$

18.

$$\begin{array}{c} \rightarrow \\ 9 - 3 - \square \\ \downarrow \\ 12 \end{array}$$

14.

$$\begin{array}{c} \rightarrow \\ 9 - 3 - 27 \\ \downarrow \\ \square \end{array}$$

19.

$$\begin{array}{c} \rightarrow \\ \square - 8 - 64 \\ \downarrow \\ 9 \end{array}$$

15.

$$\begin{array}{c} \rightarrow \\ 10 - \square - 50 \\ \downarrow \\ 12 \end{array}$$

20.

$$\begin{array}{c} \rightarrow \\ 6 - 2 - 12 \\ \downarrow \\ \square \end{array}$$



**Example:**

2; 4; 6; 8; 10. 75; 80; 85; 90.

300; 400; 500; 600. 114; 115; 116; 117.

1. 10; 12; 14; ____; ____.
2. ____; ____; 131; 132; 133.
3. 90; 95; ____; ____; ____.
4. 600; 700; ____; ____; ____.
5. 717; 718; ____; ____; ____.
6. 1,100; 1,200; ____; ____; ____.
7. 885; 890; ____; ____; ____.
8. ____; ____; ____; 422; 424.
9. 700; 705; ____; ____; ____.
10. ____; ____; ____; 4,222; 4,223.
11. 9,200; 9,300; ____; ____; ____.
12. ____; ____; ____; 288; 290.
13. ____; ____; ____; 800; 900; 1,000
14. 1,175; 1,180 ____; ____; ____.
15. ____; ____; ____; 40; 45.
16. ____; ____; ____; 200; 201.
17. 181; 183; ____; ____; ____; ____.
18. 750, ____; 760; ____; ____.
19. 830; ____; ____; 860; 870.
20. ____; 2,221; ____; 2,223;



Example:***Study and complete the number series:***

17	<u>19</u>	<u>21</u>	23	25
A1	B2	C3	<u>D4</u>	<u>E5</u>

1. 73; 83, 75, 93, _____, _____, _____,

2. 700, 700, 600 _____, _____, _____, 400, 400, _____

3. 9, 12, 15, 18, _____, _____, _____, _____, _____

4. AA1; BB2; CC3; DD4; _____, _____, _____, _____

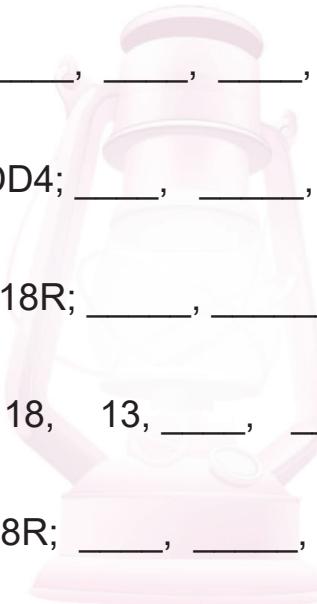
5. 12L, 14N, 16P, 18R; _____, _____, _____, _____

6. 11, 16, 12, 18, 13, _____, _____, _____, _____

7. 21U; 20T; 19S; 18R; _____, _____, _____, _____

8. 26, 1, 25, 2, 24, 3, _____, _____, _____

9. efg, 567, hij, 8, 9, 10, __, __, __, __, __, __, __, __, __, __.



10. 70, 60, 50, 40, _____, _____, _____

11. 3, 23, 4, 33, 5, _____, _____, _____, _____

12. _____, _____, _____, 66, 64, 62, 60, 58, 56s

13. 26, 25; zy, a; 24, 23; xw, b _____, _____, _____.

14. 8, 1, 2; 9, 3, 4; 10, 5, 6; _____, _____, _____

15. 501, 510, 601, 610, _____, _____, _____

16. 0, 25, 1, 26, 2, 27, _____, _____, _____

17. 880, 780, 680, 580, _____, _____, _____

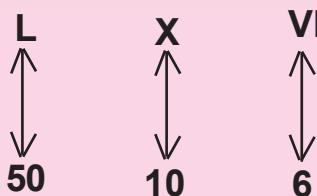
18. 40, 20, 50, 25, 60, _____, _____, _____

19. 41, 10, 51, 20, 61, _____, _____, _____

20. 33, 34, 39, 40, 45, _____, _____, _____, _____

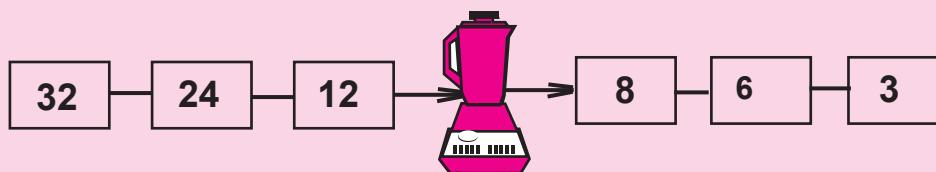


A. Example:

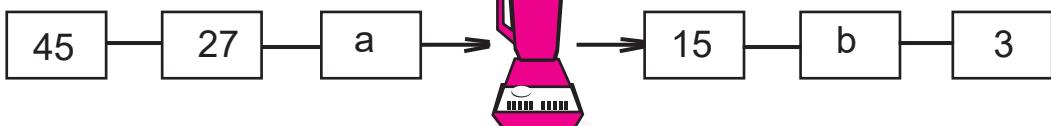


- | | | |
|---|--|--|
| <p>1. XL
↑
↓
40</p> <p>V
↑
↓
5</p> <p>X
↑
↓
<input type="text"/></p> | <p>XXV
↑
↓
<input type="text"/></p> <p>VIII
↑
↓
8</p> <p>XXI
↑
↓
21</p> | <p>XX
↑
↓
<input type="text"/></p> <p>III
↑
↓
3</p> <p>XII
↑
↓
12</p> |
| <p>IX
↑
↓
9</p> <p>XV
↑
↓
<input type="text"/></p> <p>I
↑
↓
1</p> | <p>LV
↑
↓
<input type="text"/></p> <p>XLI
↑
↓
41</p> <p>L
↑
↓
50</p> | <p>LIII
↑
↓
53</p> <p>LX
↑
↓
<input type="text"/></p> <p>IV
↑
↓
4</p> |
| <p>IV
↑
↓
4</p> <p>XIII
↑
↓
13</p> <p>XIX
↑
↓
<input type="text"/></p> | <p>II
↑
↓
2</p> <p>VI
↑
↓
6</p> <p>XLIX
↑
↓
<input type="text"/></p> | |



B. Example:

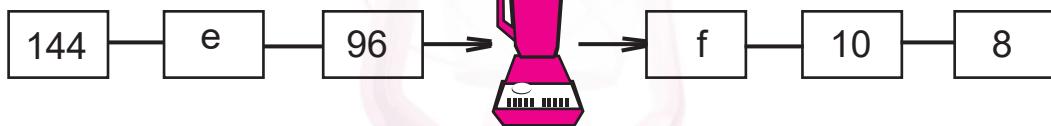
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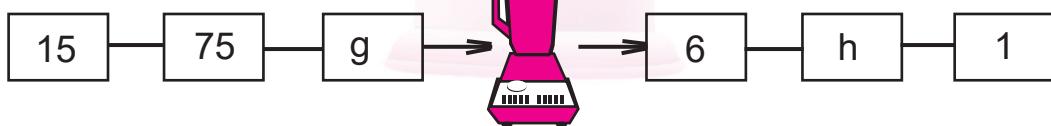
2.



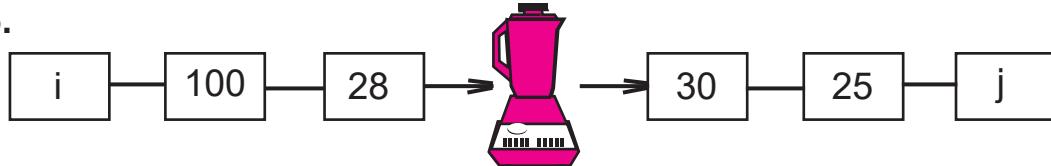
3.

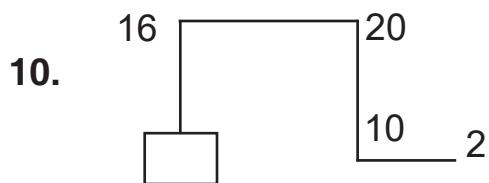
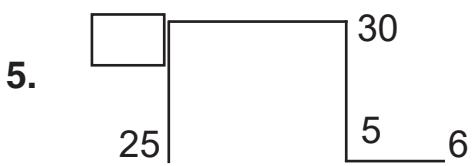
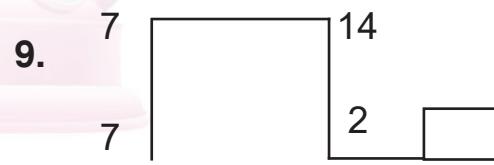
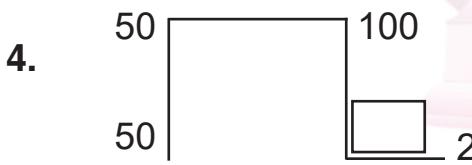
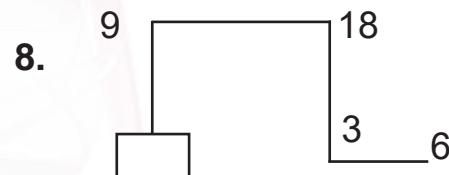
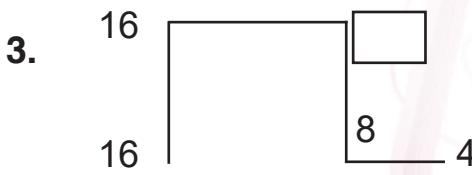
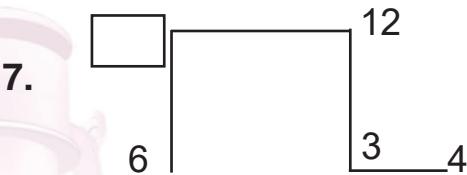
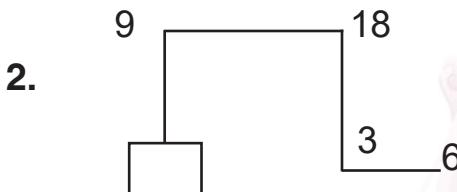
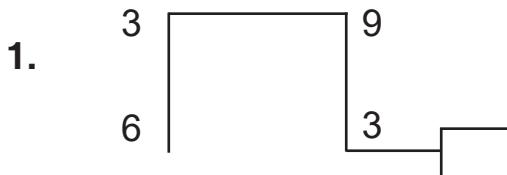
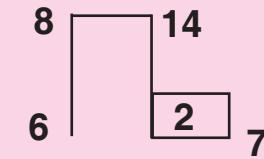
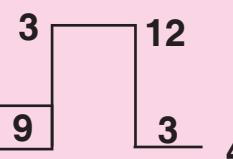
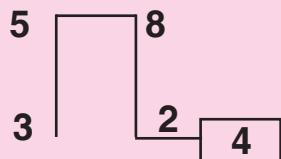


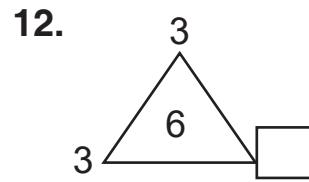
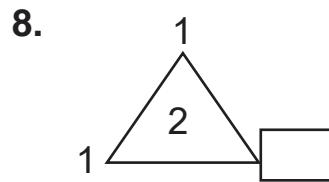
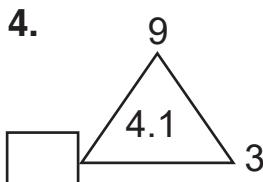
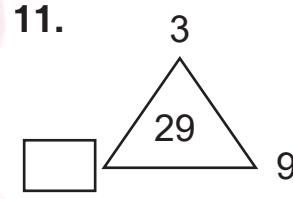
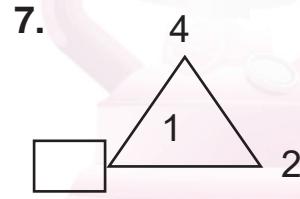
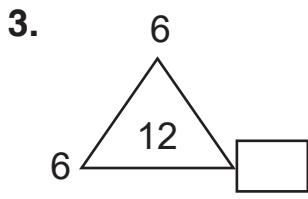
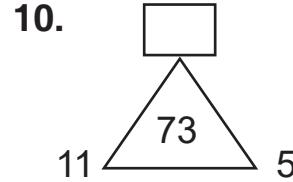
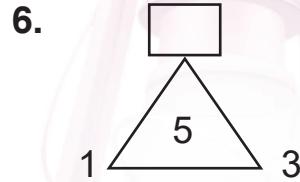
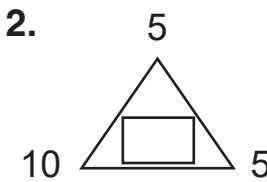
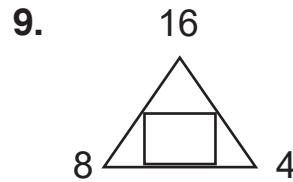
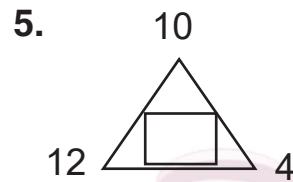
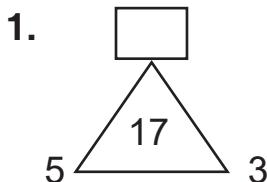
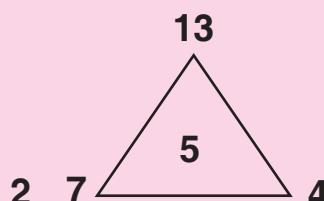
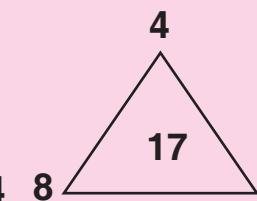
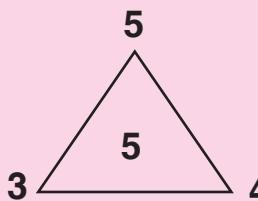
4.



5.



**A. Example:**

B. Example:



Date:

A. Example:



30	16
10	4
20	12

8

11	6
2	3
9	3

6

9	7
5	6
4	1

3

1.

17	9
6	
11	4

7

2.

10	
3	8
15	2

13

3.

53	
23	14
30	14

16

4.

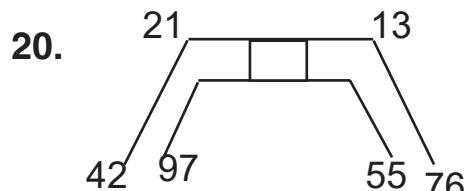
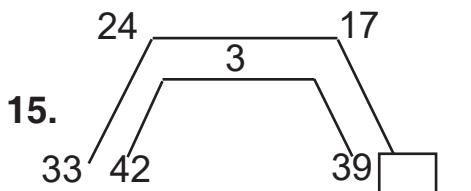
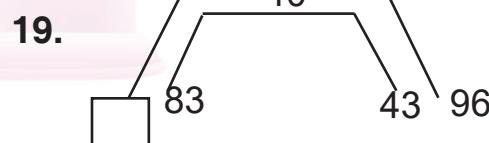
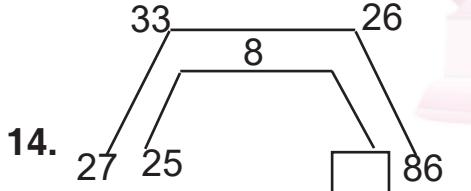
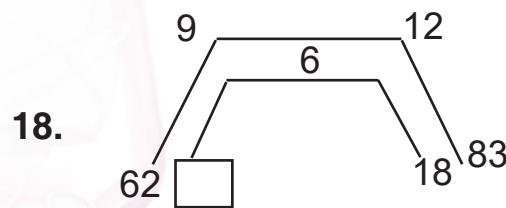
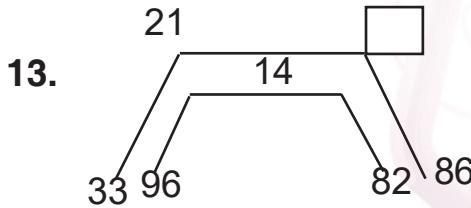
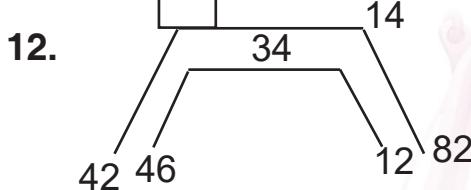
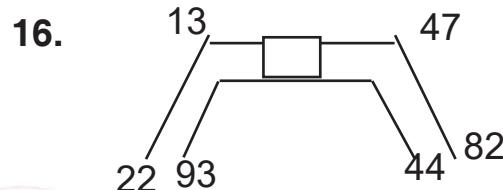
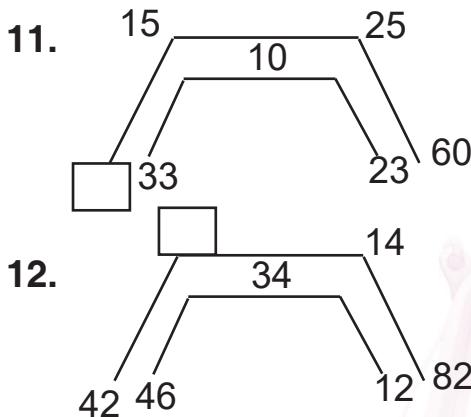
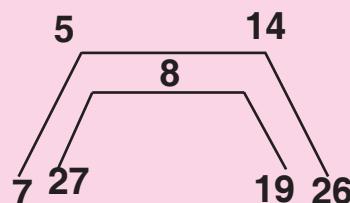
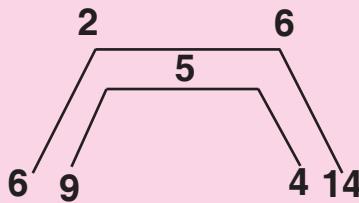
84	43
24	23
	20

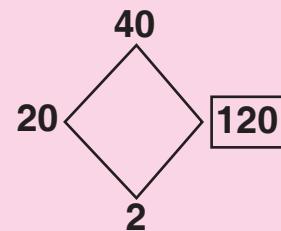
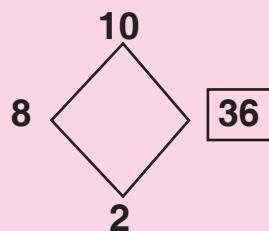
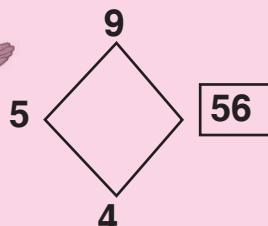
40

5.

42	30
13	20
29	10



B. Example:

A. Example:

1. 6
 square diamond
 24
 3

4. square
 2 diamond
 24
 8

7. 24
 6 diamond
 15
 square

2. 8
 5 diamond
 square
 15

5. 15
 10 diamond
 square
 4

8. $\frac{1}{2}$
 5 diamond
 square
 18

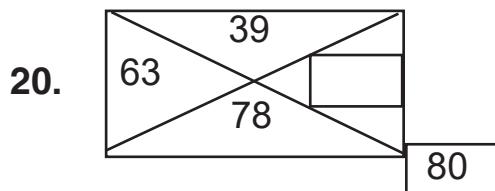
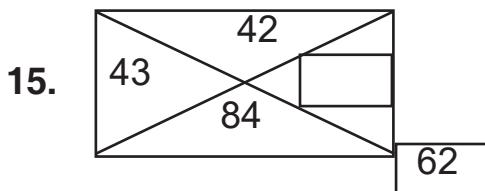
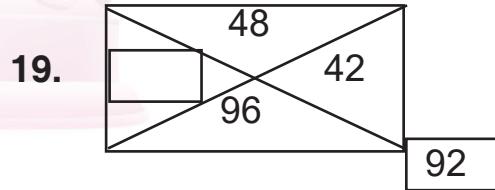
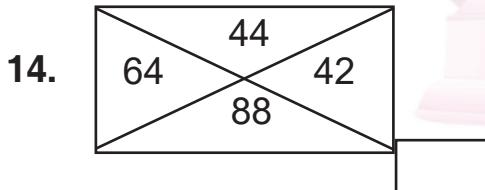
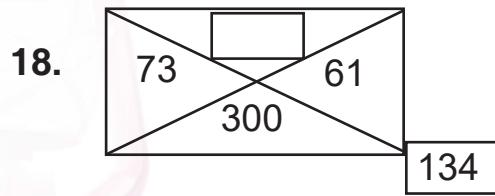
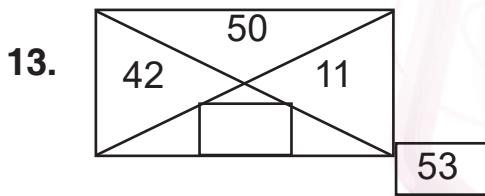
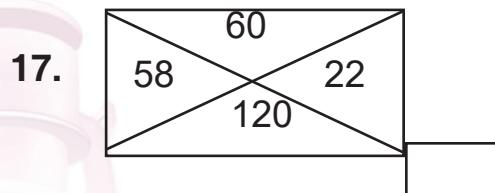
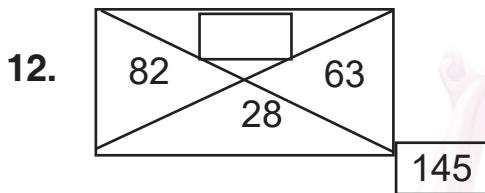
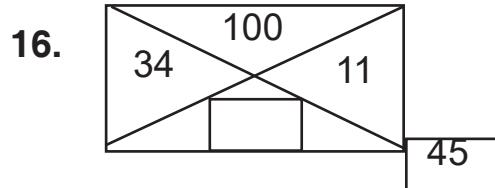
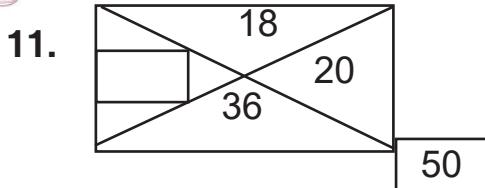
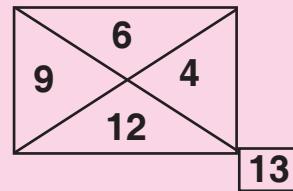
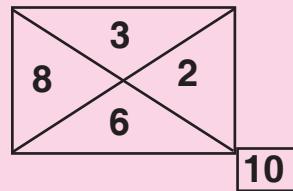
3. 7
 square diamond
 91
 7

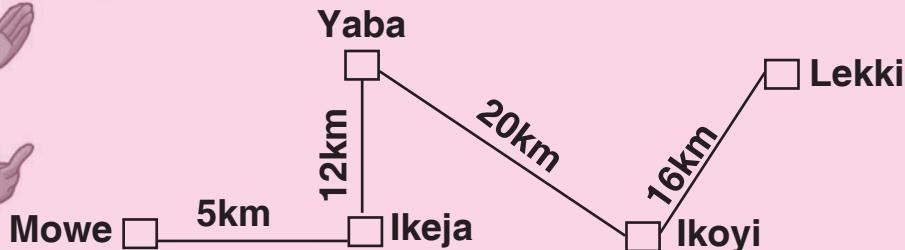
6. 24
 12 diamond
 square
 180

9. $\frac{2}{3}$
 square diamond
 27
 27

10. $\frac{1}{2}$
 $\frac{1}{3}$ diamond
 square
 $\frac{5}{12}$

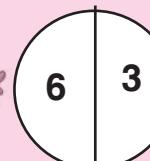


B. Example:

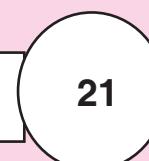
A. Example:

1. How far is it from Mowe to Yaba ? _____ km
2. The distance from Ikeja to Ikoyi is _____ km
3. Yaba is _____ km closer to Ikeja than it is to Ikoyi.
4. How far is it from Mowe to Ikoyi? _____ km
5. How far is it from Ikeja to Lekki? _____ km
6. Which two towns are nearer to each other? _____ and _____
7. Which town is farther from Yaba? Mowe or Ikoyi? _____

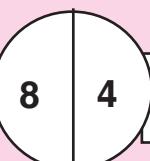


B. Example:

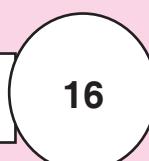
7



8

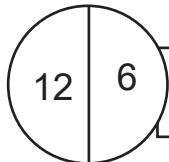


4

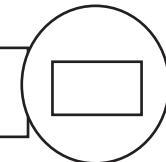


16

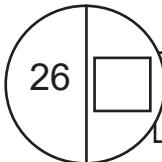
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4



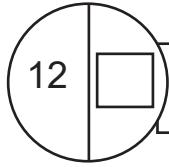
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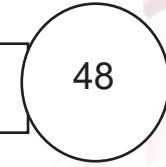
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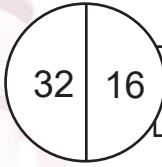
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8

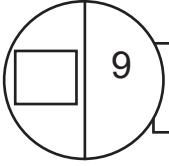


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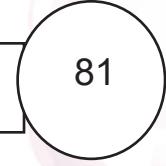


64

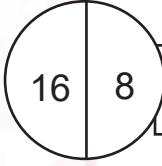
10.



9



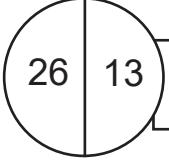
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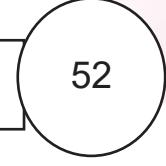
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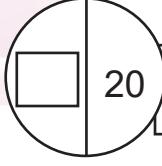
11.



9



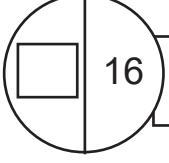
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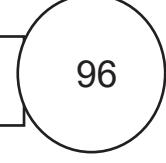
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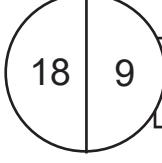
12.



6



17.

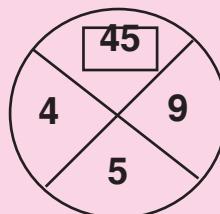
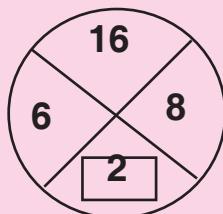
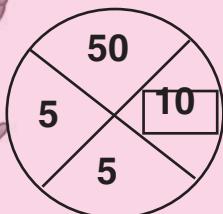


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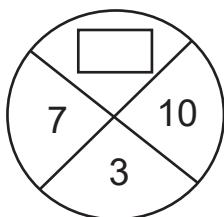




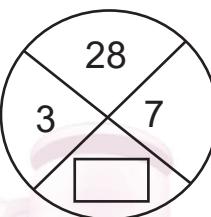
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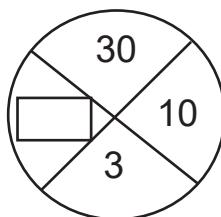
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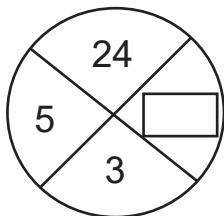
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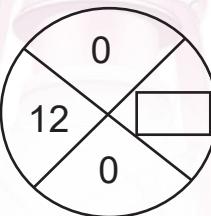
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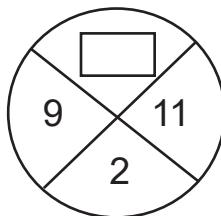
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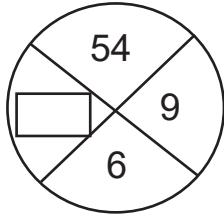
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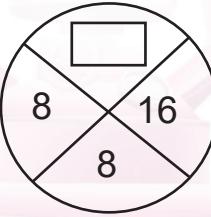
10.



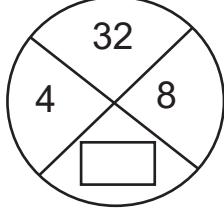
3.



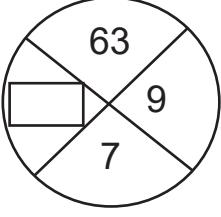
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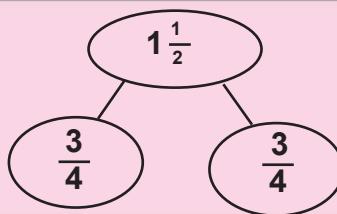
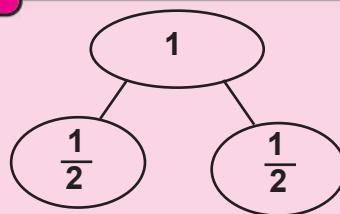


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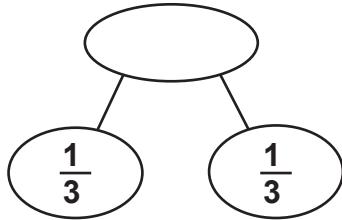


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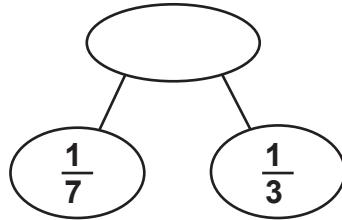


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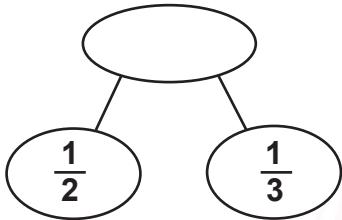
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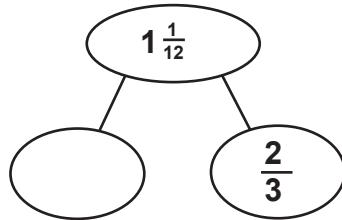
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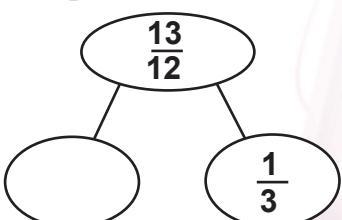
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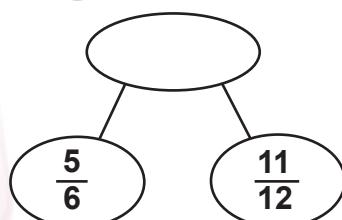
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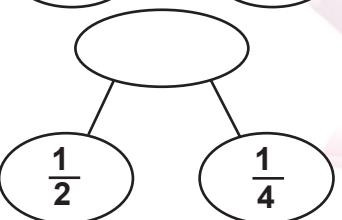
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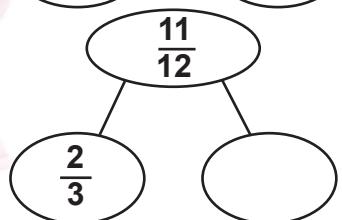
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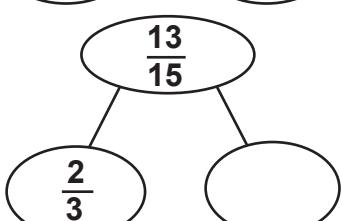
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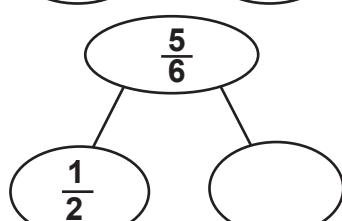
19.



15.



20.



A. Example:

64

36

25

4

49

81

14

7

16

1.

4

100

5.

36

49

9.



81

2.



81

6.



15

10.



4

3.

25

10

7.

9

121

4.

16

7

8.

64

10



B. Example:

$$\begin{array}{r} 2 \quad m \quad 3 \\ \times \quad \quad \quad \end{array} = \underline{\begin{array}{r} 2 \quad \times \quad 3 \\ \quad \quad \quad 2 \end{array}} = 3$$

$$\begin{array}{r} 12 \quad m \quad 3 \\ \times \quad \quad \quad \end{array} = \underline{\begin{array}{r} 12 \quad \times \quad 3 \\ \quad \quad \quad 2 \end{array}} = 18$$

11. $\begin{array}{r} 12 \quad m \quad 5 \\ \times \quad \quad \quad \end{array} = \underline{\hspace{2cm}} = \boxed{\hspace{1cm}}$

12. $\boxed{\hspace{1cm}} \quad m \quad 6 = \underline{\hspace{2cm}} = 21$

13. $10 \quad m \quad \boxed{\hspace{1cm}} = \underline{\hspace{2cm}} = 50$

14. $12 \quad m \quad 9 = \underline{\hspace{2cm}} = \boxed{\hspace{1cm}}$

15. $\boxed{\hspace{1cm}} \quad m \quad 8 = \underline{\hspace{2cm}} = 32$

16. $\boxed{\hspace{1cm}} \quad m \quad 6 = \underline{\hspace{2cm}} = 15$

17. $48 \quad m \quad 2 = \underline{\hspace{2cm}} = \boxed{\hspace{1cm}}$

18. $14 \quad m \quad \boxed{\hspace{1cm}} = \underline{\hspace{2cm}} = 35$

19. $18 \quad m \quad 4 = \underline{\hspace{2cm}} = \boxed{\hspace{1cm}}$

20. $\boxed{\hspace{1cm}} \quad m \quad 3 = \underline{\hspace{2cm}} = 18$



Example:

The word something is represented by the number
721563489.

then = 6358, 63275 = those

- | | |
|-----------------|-------------------|
| 1. Some = _____ | 11. 341 = _____ |
| 2. 347 = _____ | 12. the = _____ |
| 3. hoe = _____ | 13. 6351 = _____ |
| 4. 358 = _____ | 14. home = _____ |
| 5. met = _____ | 15. 6347 = _____ |
| 6. 756 = _____ | 16. meteo = _____ |
| 7. me = _____ | 17. 3226 = _____ |
| 8. 35 = _____ | 18. 3215 = _____ |
| 9. 346 = _____ | 19. thing = _____ |
| 10. get = _____ | 20. 9285 = _____ |



**Example:**

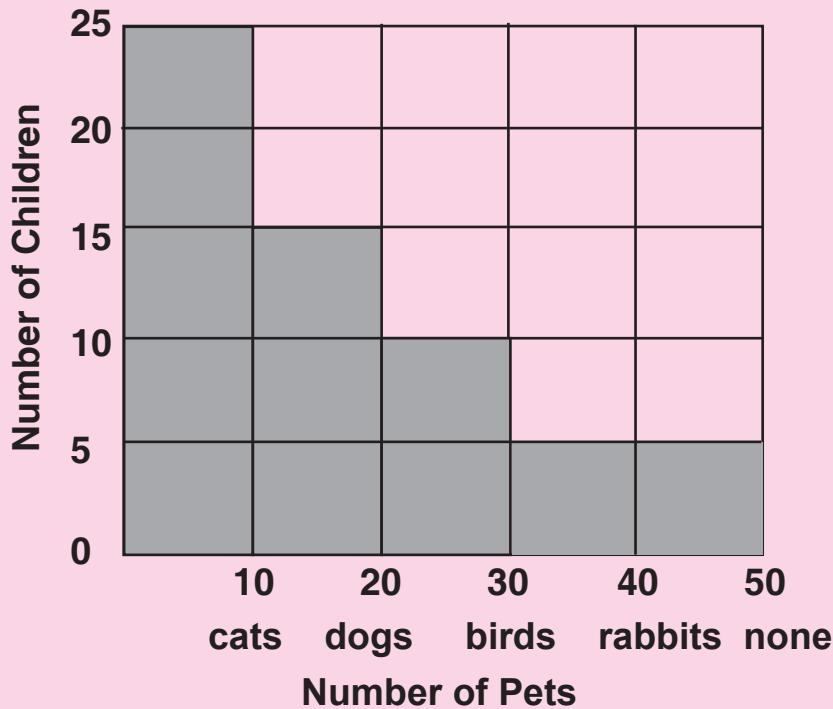
The word ‘substitute’ is represented by the numbers 6306414348.

$$40 + 4 = \text{tb} + \text{t}$$

$$\text{st} \div \text{e} = 64 \div 8$$

- | | |
|--------------------------|---|
| 1. $64 \div 4 =$ _____ | 11. $\text{st} + \text{ui} =$ _____ |
| 2. $40 + 8 =$ _____ | 12. $\text{sb} + \text{e} =$ _____ |
| 3. $3 \times 0 =$ _____ | 13. $\text{is} \div \text{t} =$ _____ |
| 4. $4 \times 4 =$ _____ | 14. $\text{ut} + \text{s} =$ _____ |
| 5. $81 \div 3 =$ _____ | 15. $\text{te} + \text{b} =$ _____ |
| 6. $66 \div 11 =$ _____ | 16. $\text{sb} \times \text{t} =$ _____ |
| 7. $10 + 10 =$ _____ | 17. $\text{ib} \times \text{u} =$ _____ |
| 8. $18 - 3 =$ _____ | 18. $\text{ue} + \text{t} =$ _____ |
| 9. $66 + 0 =$ _____ | 19. $\text{sb} \div \text{t} =$ _____ |
| 10. $40 \div 10 =$ _____ | 20. $\text{ee} + \text{ib} =$ _____ |



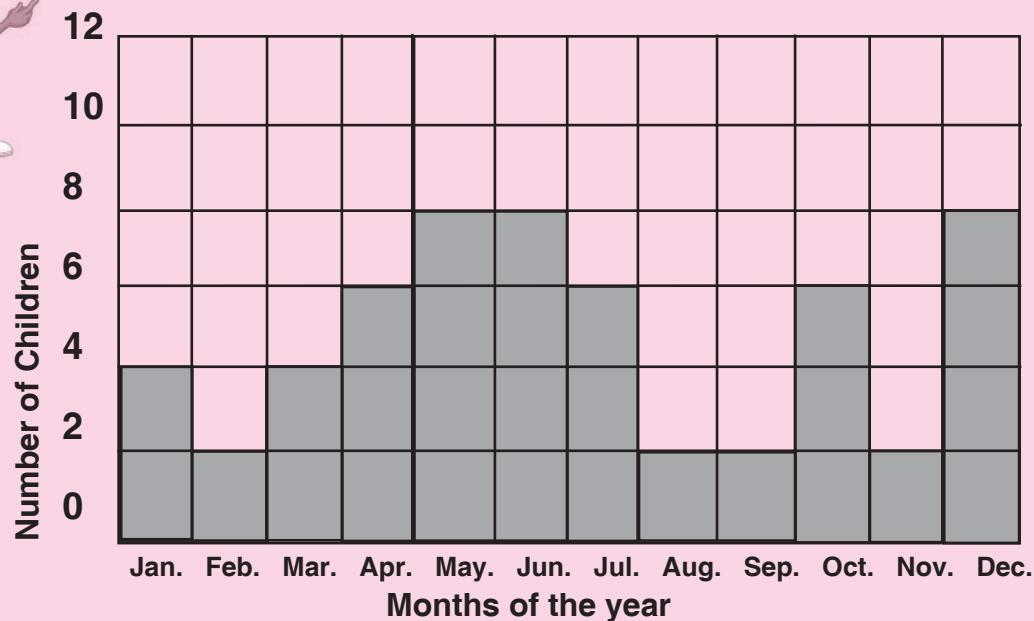
Example:**Pets owned by children in a class**

1. What number of children have rabbits? _____.
2. How many children have cats? _____.
3. The number of dogs owned by the children are _____.
4. Number of birds and rabbits added together are _____.
5. Total number of cats and dogs are _____.



6. Number of all the pets owned by the children are _____.
7. If we add the number of birds and dogs together, we have _____ pets.
8. Number of children with no pets are _____.
9. If we add the number of dogs, birds and cats, we have _____.
10. What is the total number of children in class? _____.



Example:

1. In January _____ children had their birthdays.
2. The highest number of children had their birthdays in the month _____ of _____, _____ and _____.
3. The total number of children who had their birthdays in February, March and May are _____.
4. The total number of children born in February, August, September and November _____.
5. Add the number of children having their birthdays in March, September, October and December _____.



6. Subtract the number of children having their birthdays in October from the ones in June _____.
7. What is the total number of children having their birthdays in the last six months of the year? _____.
8. Add the total number of children born in the first six months _____.
9. Subtract the number of children in the last six months from the first six months _____.
10. The total number of children born from January to December is _____.




Example:

19; 16; 13; 10.

1; 4; 16; 64.

47; 51; 55; 59.

1. 2; 6; 8; 10. 11. 4,040; 2,020; ;505.
2. 428; 530; 632; . 12. 4; 16; 64; .
3. 111; 222; ; 444. 13. 500; ;750; 875.
4. ; 101; 113, 125. 14. 62; 56; 49; .
5. 55; 60; 65; ; 75. 15. 13; 14; 15; 22; 23;
24; .
6. 26; 22; ; 14. 16. 1; 9; 81; .
7. 67; 77; 87; . 17. 25; 32; ; 49.
8. 90; 87; 83; . 18. 789; 678; ; 456. .
9. ; 100; 1,000; 10,000 . 19. 123; 235; 347; .
10. 8; ; 24; 32. 20. 605; ; 595; 590.



Example:

$$3 \times 5 = 51 \quad 7 * 4 = 14$$

$$4 \times 6 = 42 \quad 9 * 6 = 27$$

$$1. \quad 3 \times 5 = \boxed{} \quad 11. \quad 8 * 8 = \boxed{}$$

$$2. \quad \frac{1}{4} \times 72 = \boxed{} \quad 12. \quad 12 * \boxed{} = 60$$

$$3. \quad \boxed{} \times 3 = 72 \quad 13. \quad 5 * \boxed{} = 40$$

$$4. \quad \boxed{} \times 5 = 54 \quad 14. \quad 10 * 6 = \boxed{}$$

$$5. \quad 14 \times \boxed{} = 65 \quad 15. \quad \frac{1}{2} * 12 = \boxed{}$$

$$6. \quad 7 \times 7 = \boxed{} \quad 16. \quad 14 * \boxed{} = 14$$

$$7. \quad 25 \times \boxed{} = 57 \quad 17. \quad 17 * 4 = \boxed{}$$

$$8. \quad \boxed{} \times 21 = 24 \quad 18. \quad 50 * \boxed{} = 100$$

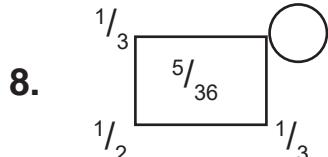
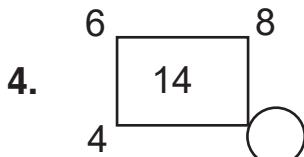
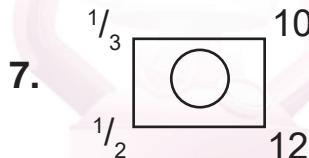
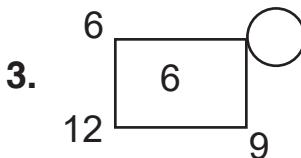
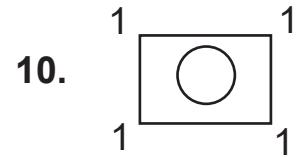
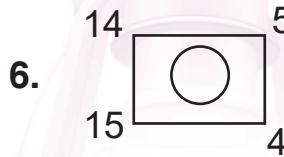
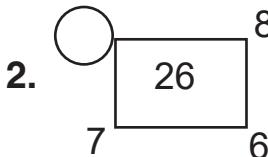
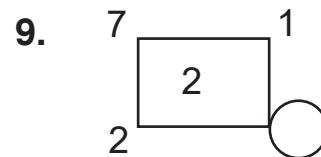
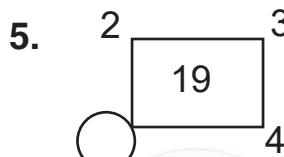
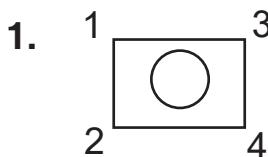
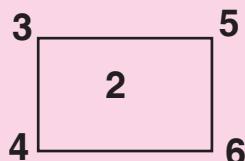
$$9. \quad 12 \times 12 = \boxed{} \quad 19. \quad \boxed{} * 8 = 24$$

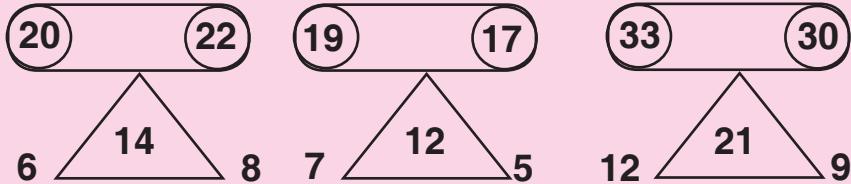
$$10. \quad 0 \times 10 = \boxed{} \quad 20. \quad 12 * 12 = \boxed{}$$





A. Example:



B. Example:

11. 28 \square

10 18 8

16. \square 68

34 51 17

12. 19 23

5 14 \square

17. 105 90

40 51 25

13. 43 38

16 \square 11

18. 49 35

21 28 \square

14. 72 69

\square 47 22

19. 99 99

\square 66 33

15. \square 43

19 31 12

20. 43 \square

15 28 13



**A. Example:****A** \times **B****A** \times **B**

2

3 \times

4

3 \times 4

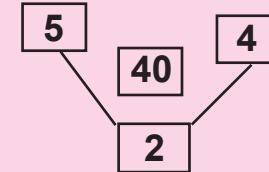
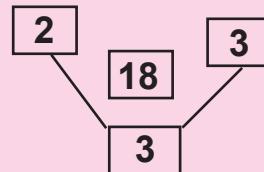
2

12

2

= 6

1. What is 5×6 =
2. What is 0.2×0.8 =
3. What is $\frac{3}{8} \times \frac{4}{15}$ =
4. $3 \times$ = 12
5. $\times 9$ = 27

**B. Example:**

- 6.
 - 7.
 - 8.
 - 9.
 - 10.
- Each number has two branches pointing to boxes. The boxes have numbers or fractions inside. The final box at the end of each branch contains a number.



A. Example:

$$24 - 7.5 - 2.5 = \boxed{4} - 3 = 1$$

$$72 - 35 - 7 = \boxed{12} - 5 = 7$$

1.
$$81 - 25 - 5 = \boxed{} - 5 = 4$$

6.
$$200 - 150 - 15 = 10 - \boxed{} = 1$$

2.
$$49 - 60 - 12 = 7 - \boxed{} = 2$$

7.
$$51 - 20 - 2 = 17 - \boxed{} = 1$$

3.
$$90 - 27 - \boxed{} = 9 - 3 = \boxed{}$$

8.
$$66 - 40 - 20 = 6 - \boxed{} = \boxed{}$$

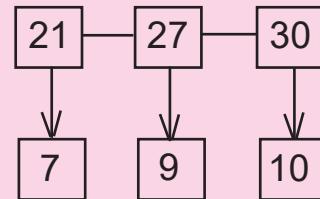
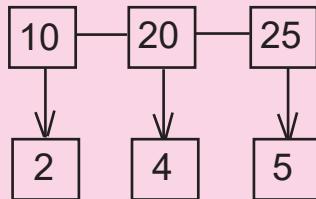
4.
$$45 - 10 - \boxed{} = 10 - \boxed{} = 1$$

9.
$$300 - 50 - 30 = \boxed{10} - \boxed{} = 5$$

5.
$$48 - 36 - \boxed{} = 12 - 6 = \boxed{}$$

10.
$$\boxed{} - 18 - 12 = 3 - \boxed{} = 2$$



B. Example:

1. $18 \rightarrow 48 \rightarrow 66$
↓ ↓ ↓
3 [] 11
2. $8 \rightarrow 16 \rightarrow 40$
↓ ↓ ↓
2 4 []
3. $27 \rightarrow 81 \rightarrow 90$
↓ ↓ ↓
[] 9 10
4. $20 \rightarrow 24 \rightarrow 40$
↓ ↓ ↓
10 [] 20
5. $14 \rightarrow 35 \rightarrow []$
↓ ↓ ↓
2 5 9
6. $[] \rightarrow 48 \rightarrow 56$
↓ ↓ ↓
4 6 7
7. $50 \rightarrow [] \rightarrow 120$
↓ ↓ ↓
5 8 12
8. $66 \rightarrow 77 \rightarrow []$
↓ ↓ ↓
6 7 11



Example:

3	2	1	6
5	4	9	3
1	5	2	3
6	4	3	3

11	5	10	2
4	A	3	9
2	6	3	C
3	2	B	5

1. A = _____
2. B = _____
3. C = _____

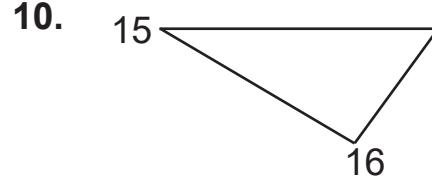
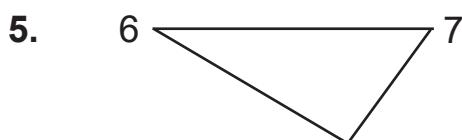
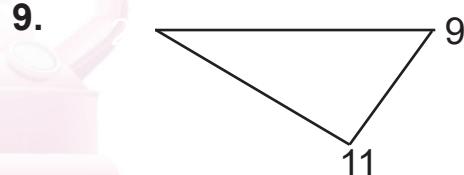
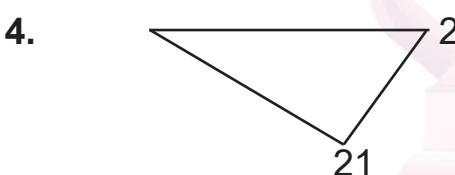
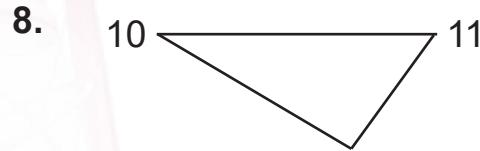
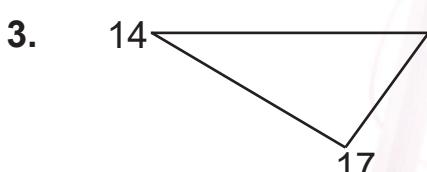
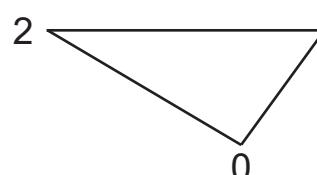
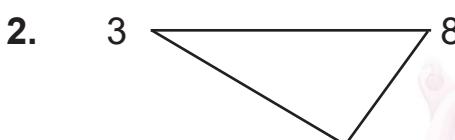
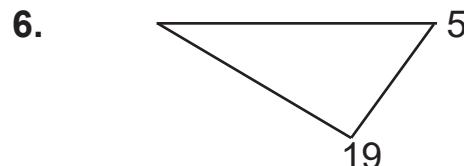
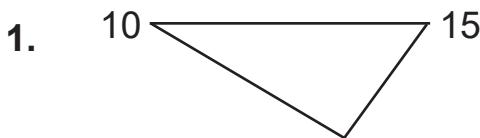
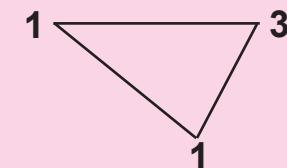
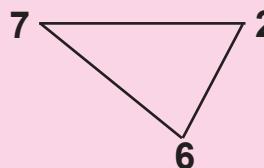
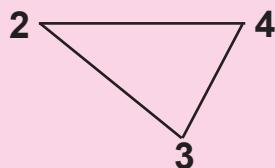
D	7	11	F
3	10	4	9
6	7	E	1
5	4	2	13

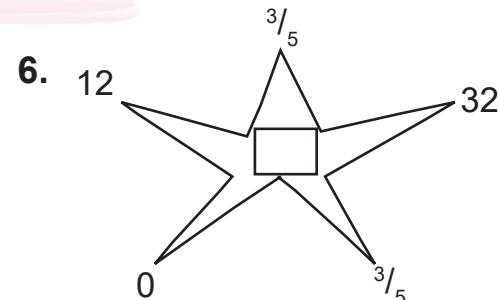
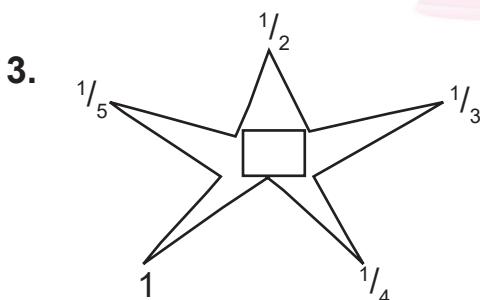
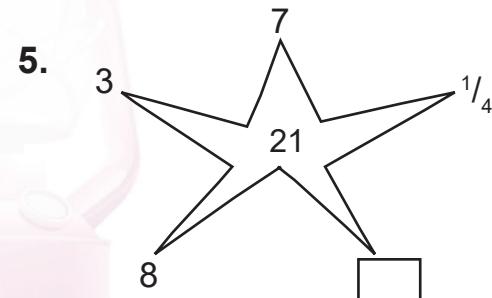
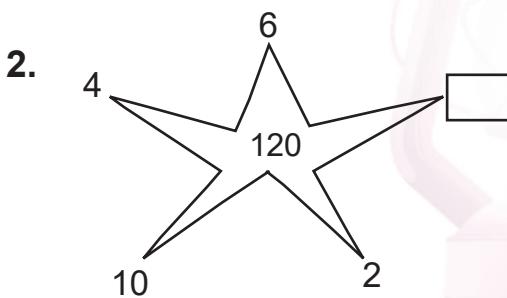
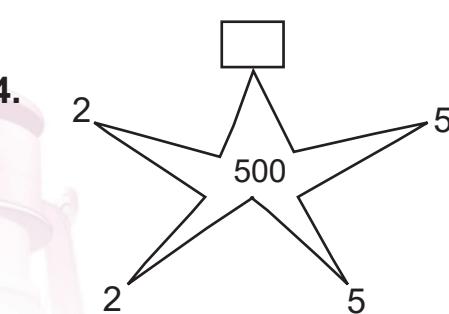
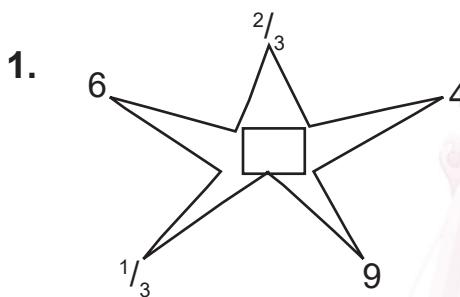
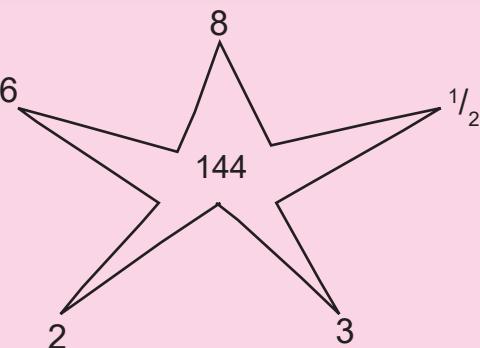
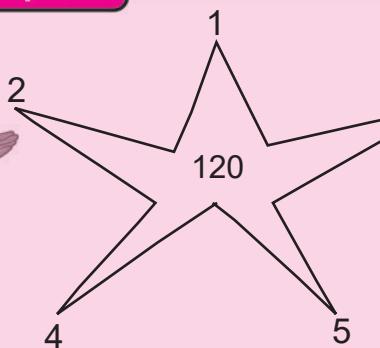
4. D = _____
5. E = _____
6. F = _____

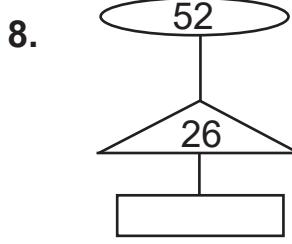
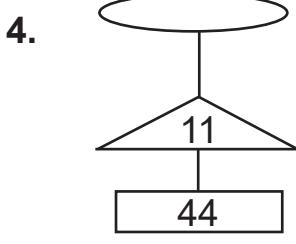
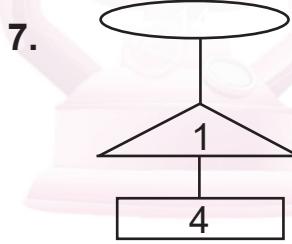
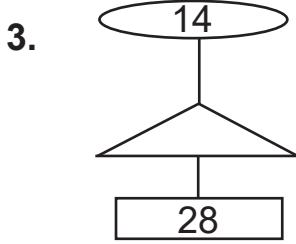
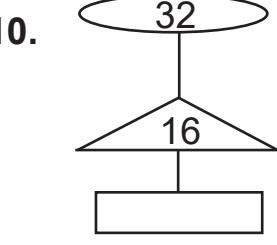
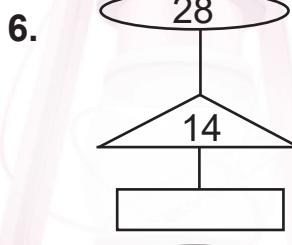
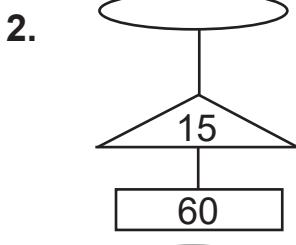
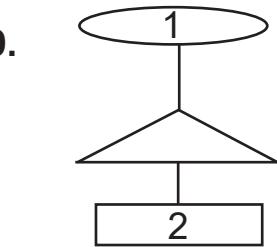
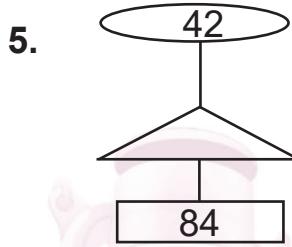
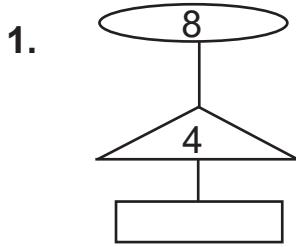
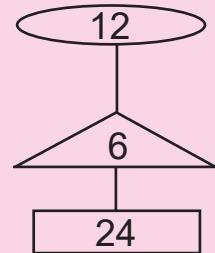
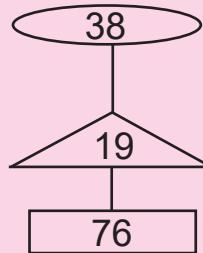
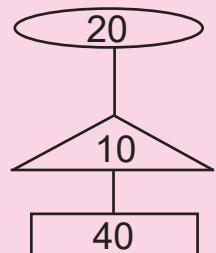


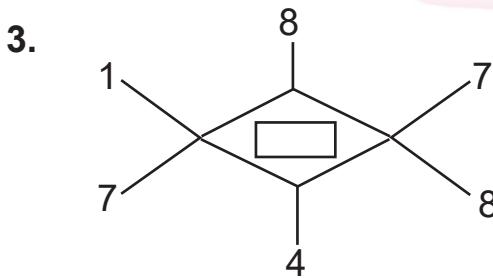
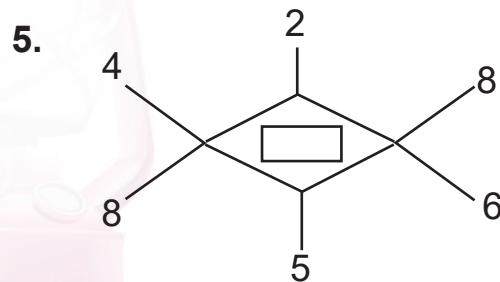
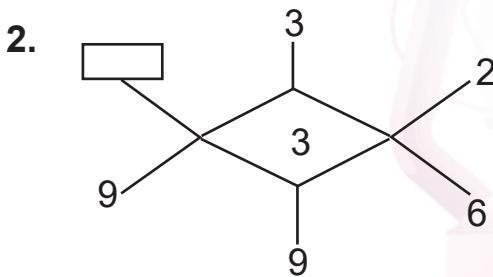
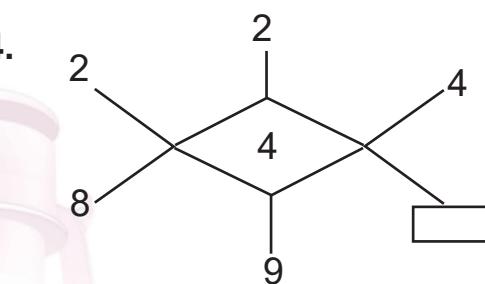
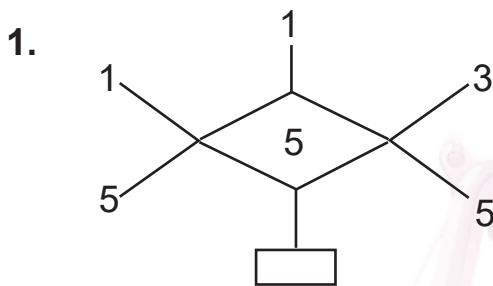
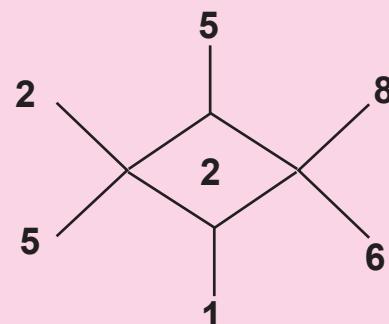
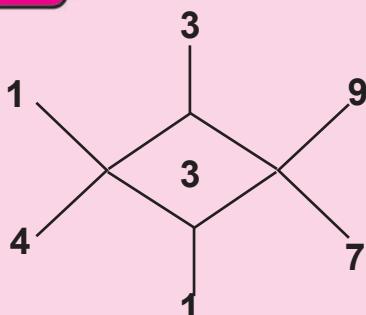


Date:

Example:

Example:

**Example:**

Example:

Example:
 $\frac{1}{4}$
 $\frac{3}{4}$
 1
 $\frac{1}{3}$
 $\frac{2}{9}$
 $\frac{5}{9}$
 $\frac{1}{6}$
 $\frac{2}{3}$
 $\frac{5}{6}$

1. $\frac{1}{2}$ | \square
 $\frac{1}{5}$

2. $\frac{1}{4}$ | $\frac{11}{12}$
 \square

3. $\frac{2}{5}$ | \square
 $\frac{1}{5}$

4. \square | $\frac{9}{14}$
 $\frac{1}{2}$

5. $\frac{1}{6}$ | $\frac{5}{12}$
 \square

6. $\frac{2}{7}$ | $\frac{13}{21}$
 \square

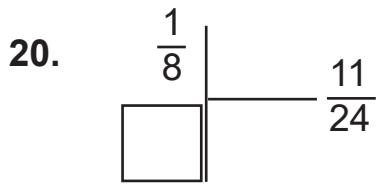
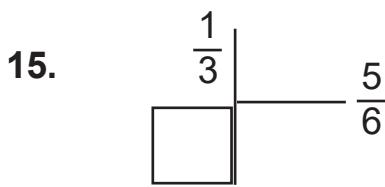
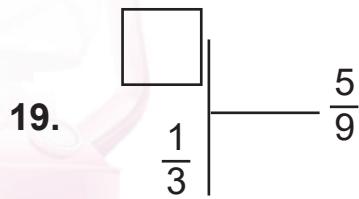
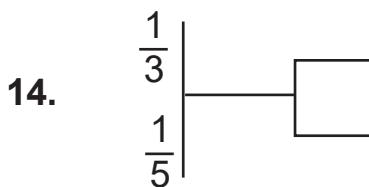
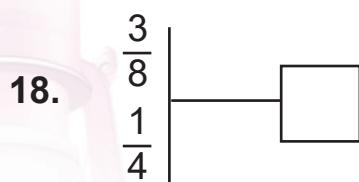
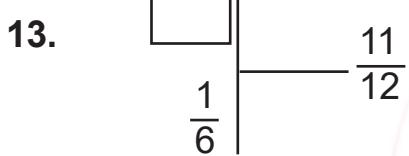
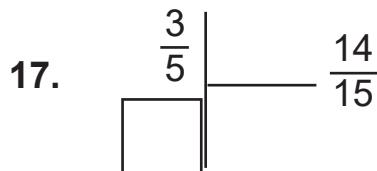
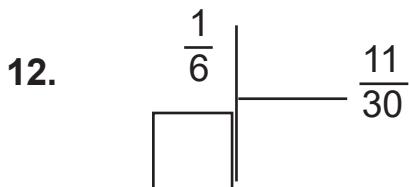
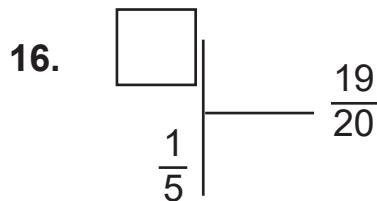
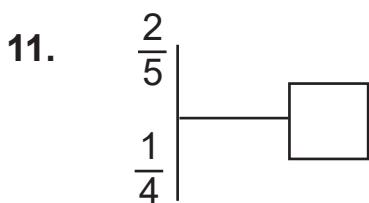
7. $\frac{3}{7}$ | \square
 $\frac{1}{4}$

8. \square | $\frac{7}{12}$
 $\frac{1}{3}$

9. $\frac{2}{5}$ | \square
 $\frac{1}{2}$

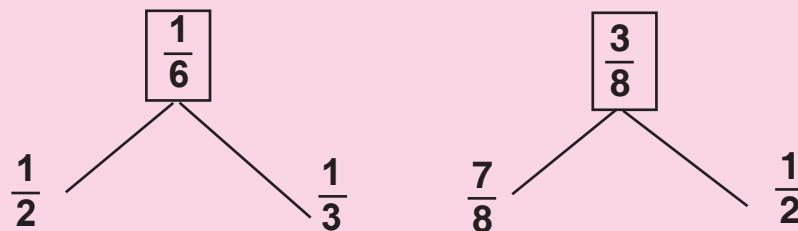
10. $\frac{1}{5}$ | $\frac{9}{20}$
 \square



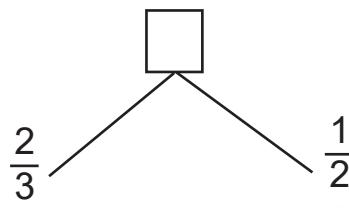




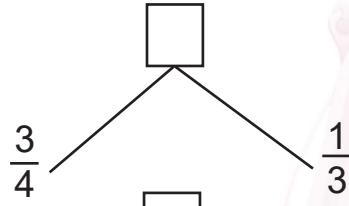
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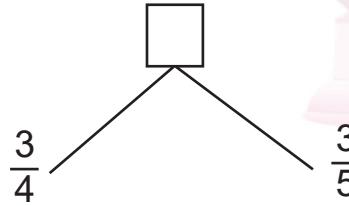
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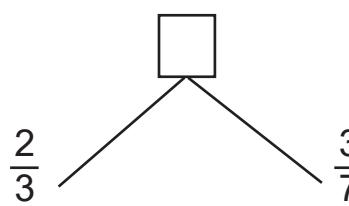
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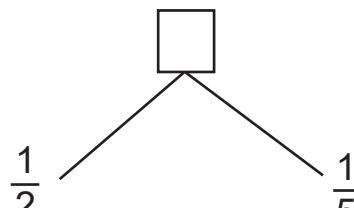
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5.



6.



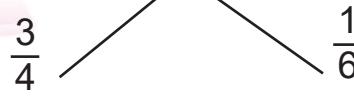
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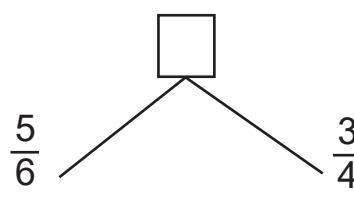
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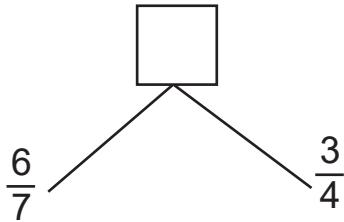
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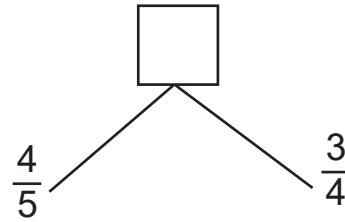
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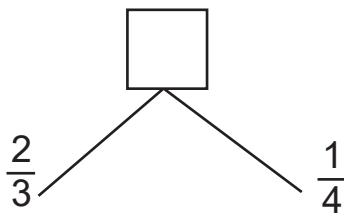
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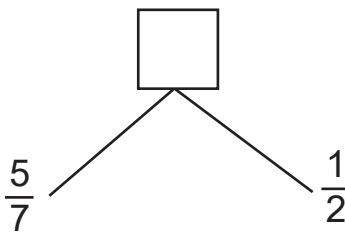
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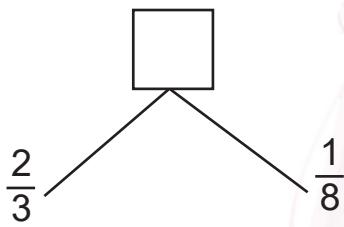
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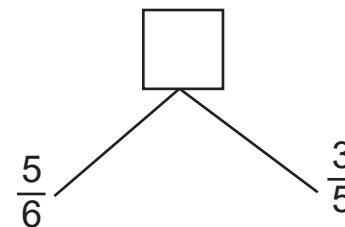
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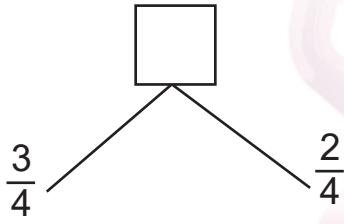
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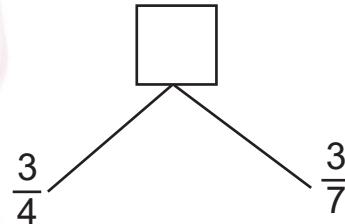
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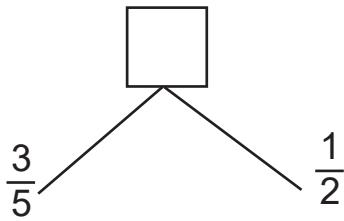
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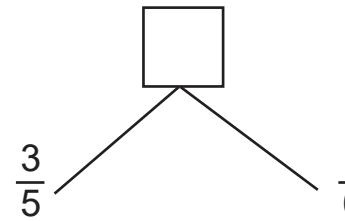
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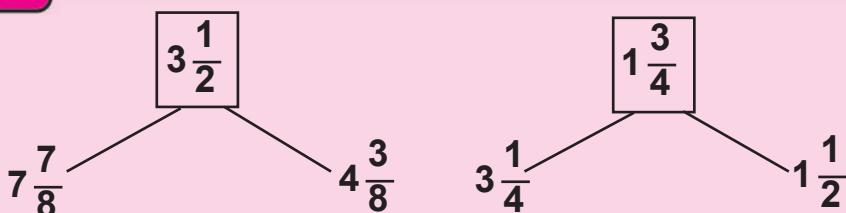


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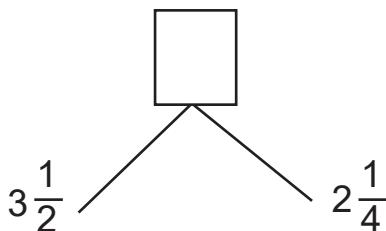




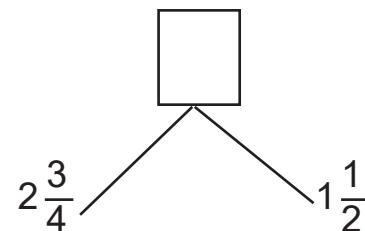
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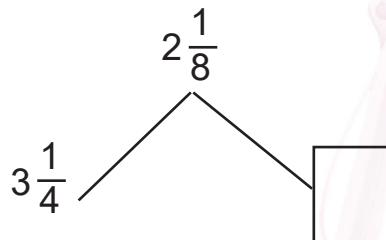
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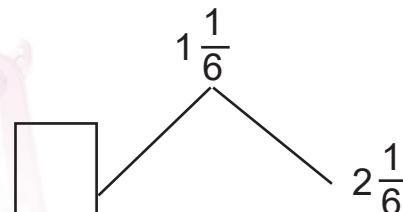
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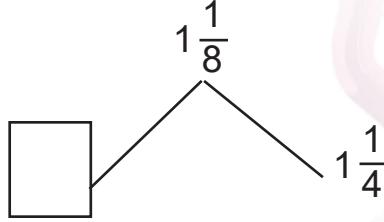
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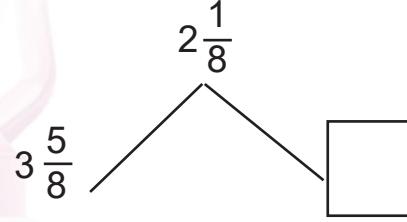
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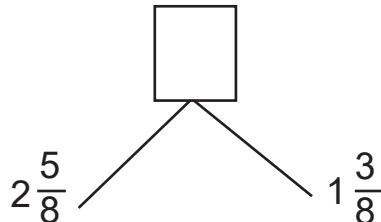
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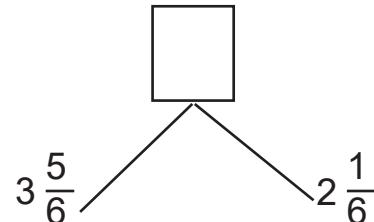
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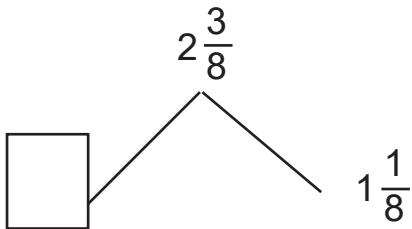
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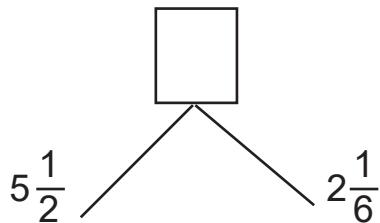
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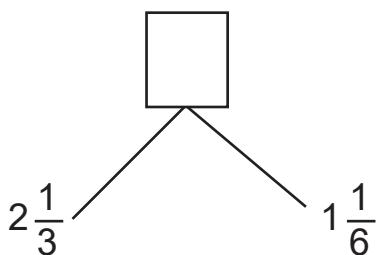
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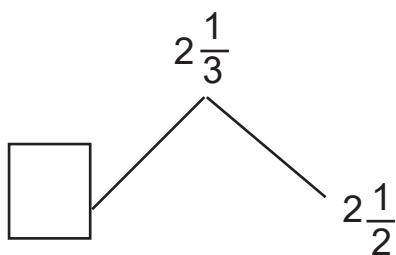
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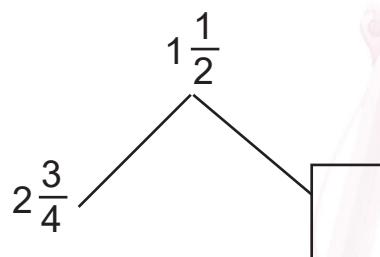
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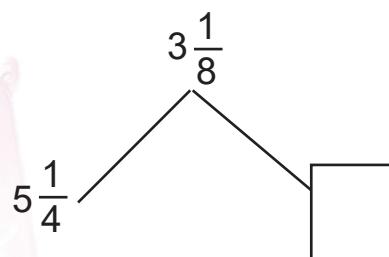
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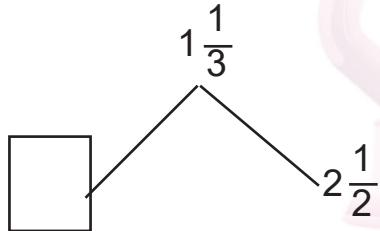
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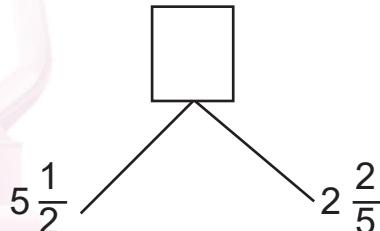
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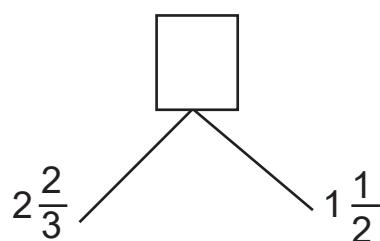
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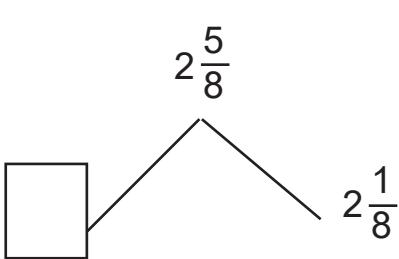
17.



13.



18.





Study each number pattern and fill each box:

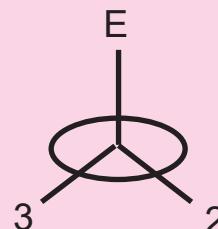
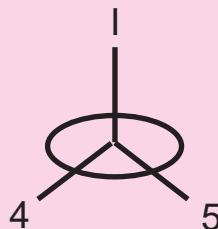
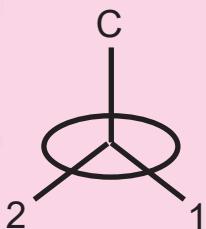
1. 2, 3, 5, 8, 12, , 23, 30.
2. 93, 89, , 81, 77, 73.
3. 2, 3, 5, 6, 8, 9, 11, 12, ,
15, 17, 18.
4. 5, 15, 25, 35, , 55, 65.
5. 7, 14, 21, , 35, 42.
6. 1, 6, 11, 16, , 26.
7. 32, 16, 8, , 2, 1.
8. 120, 100, 80, , 40.
9. 2, 4, 6, , 10, 12.
10. 3, 6, 5, 10, 7, 14, , 18.



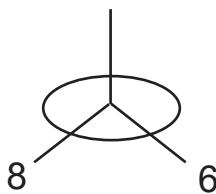


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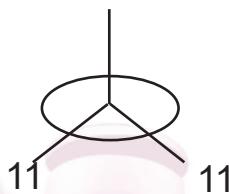
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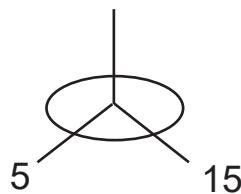
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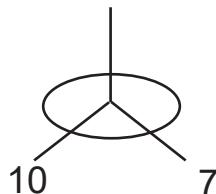
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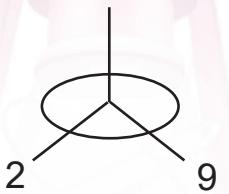
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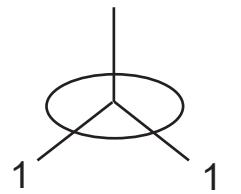
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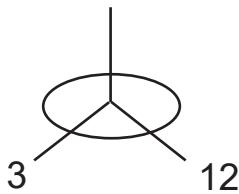
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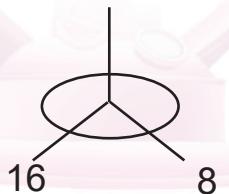
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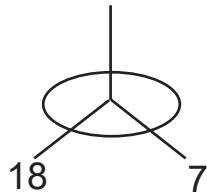
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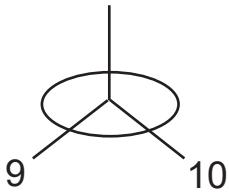
7.



4.



8.



B. Example:

G	H	E
M	E	B
D	F	J

11

A	K	C
---	---	---

F	B	G
---	---	---

H	D	
---	---	--

12

B		C
---	--	---

D	F	M
---	---	---

L	J	A
---	---	---

13

F	A	J
---	---	---

	C	E
--	---	---

N	A	B
---	---	---

14

G	E	M
---	---	---

F		R
---	--	---

S	E	A
---	---	---



Example:

If F I S H E R = 6 3 5 4 2 1

$$\text{H E R} = \boxed{4} \times \boxed{2} \times \boxed{1} = 8$$

$$\text{I S} = 3 \times 5 = 15$$

1. IF + HE = _____ =

2. $\frac{\text{F H}}{\text{E R}}$ = _____ =

3. $\frac{\text{I E}}{\text{R F}}$ = _____ =

4. 6354 = _____ =

5. H x I x S = _____ =

6. FS - OH! = _____ =

7. IS ÷ IR = _____ =

8. EF x SR = _____ =

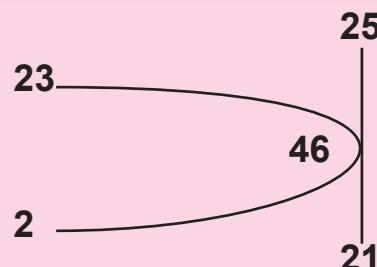
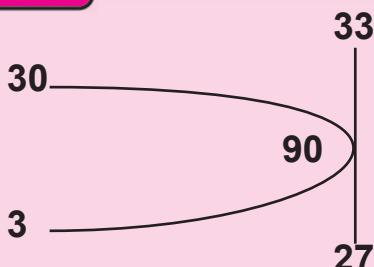
9. IS + I = _____ =

10. 435 = _____ =





Example:



1. 10 ————— 50
5 ————— 5
2. 18 ————— 36
20 ————— 16
3. 14 ————— 24
2 ————— 12
4. 12 —————
4 ————— 8
5. 33 ————— 99
3 —————
6. 18 ————— 32
10 ————— 16
7. 12 ————— 120
10 ————— 2
8. 10 ————— 80
8 —————





STEPS TO QUANTITATIVE REASONING

For Primary Schools

4

Ore Olunloyo



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Preface



Steps to Quantitative Reasoning is a collection of carefully graded books designed to put the pupils through the skills needed for quantitative reasoning.

It is hoped that at the end of the series, the pupils who use it would have a basic understanding in tackling any past question papers on Quantitative Aptitude, and that it would guide the child step-by-step to a brilliant performance in the common entrance examination, Universal Basic Education examination and similar intelligence tests. Since solutions to problems in the books demand careful attention and reasoning, the series impact, gradually, these skills to children.

It is however very important for the teacher to structure the learning process even though the exercises are self-explanatory.

Remember, we learn by doing, but we learn best of all by doing correctly.

In each of the books, the exercises and tests become progressively difficult. The books can be used at home and in school. There is an answer book for the series.

In this revised edition, more exercises have been included to expand further the pupils' activities and to prepare them for Universal Basic Education examinations.

Steps to Quantitative Reasoning has a companion series called *Steps to Verbal Reasoning*.

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Subtraction

1 2 3 4 5 6
7 8 9
X
iii
0 6 8
0 9

Contents



Exercise	1	Test 7	74
Exercise 2	5	Test 8	76
Exercise 3	7	Test 9	78
Exercise 4	9	Test 10	80
Exercise 5	12	Test 11	81
Exercise 6	15	Test 12	82
Exercise 7	18	Test 13	84
Exercise 8	21	Test 14	86
Exercise 9	25	Test 15	87
Exercise 10	27	Test 16	88
Exercise 11	29	Test 17	90
Exercise 12	35	Test 18	91
Exercise 13	38	Test 19	93
Exercise 14	40	Test 20	94
Exercise 15	43	Test 21	95
Exercise 16	47	Test 22	96
Exercise 17	50	Test 23	97
Exercise 18	54	Test 24	98
Exercise 19	59	Test 25	100
Test 1	63	Test 26	102
Test 2	64	Test 27	104
Test 3	66	Test 28	105
Test 4	68	Test 29	107
Test 5	70	Test 30	108
Test 6	72		