

**Factoring and Lowest Common Multiple
Advanced****1** Is 60 a multiple of 20

A

No

B

Yes

2 Is 700 a multiple of 140

A

Yes

B

No

3 Is 90 a multiple of both 18 and 30?

A

Yes

B

No

4 Is 882 a multiple of both 210 and 126?

A

Yes

B

No

5 Is m a multiple of 30

A

No

B

Yes

6 Is c a multiple of 84

A

Yes

B

No

7 Is x a multiple of both 28 and 42?

A

No

B

Yes

8 Is n a multiple of both 60 and 250?

A

No

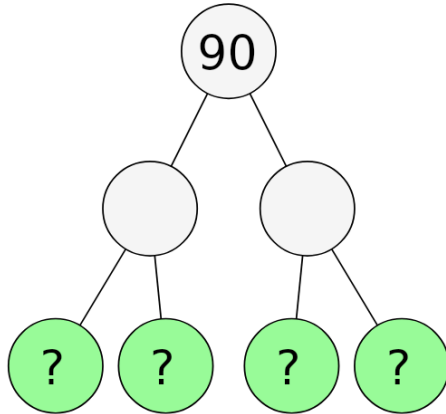
B

Yes



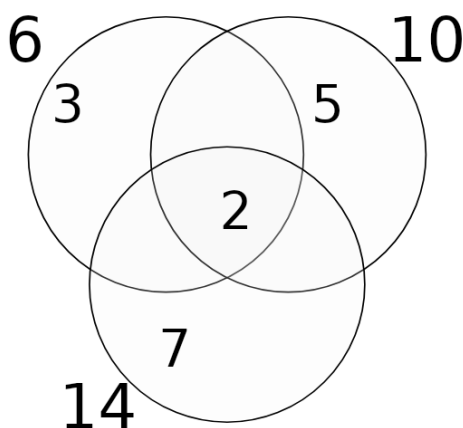
Factoring and Lowest Common Multiple Advanced

- 9 Finish the factor tree to find the prime factorization of this number



- | | | |
|---|---|---|
| A $2 \times 3 \times 3 \times 5$ | B $2 \times 3 \times 3 \times 5 \times 5$ | C $3 \times 3 \times 5$ |
| D $2 \times 3 \times 3 \times 3 \times 5$ | E $2 \times 3 \times 15$ | F $2 \times 2 \times 3 \times 3 \times 5$ |

- 12 Use the factor diagram to find the lowest common multiple of these numbers



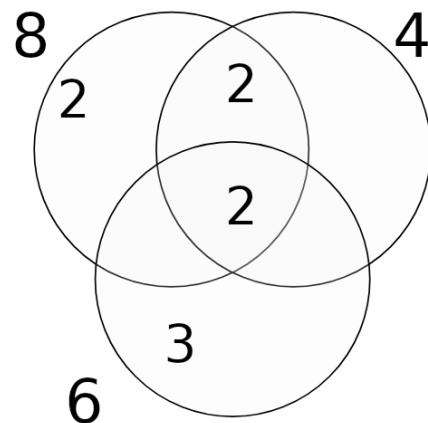
- | | | |
|---------|-------|-------|
| A 1,048 | B 210 | C 32 |
| D 416 | E 205 | F 415 |

- 10 Show the prime factorization of this number

16

- | | |
|--------------------|-------------------|
| A {2, 2, 2} | B {2, 2, 2, 2} |
| C {2, 2, 2, 2, 2} | D {2, 2, 2, 2, 5} |
| E {2, 2, 2, 2, 13} | F {2, 2, 4} |

- 11 Use the factor diagram to find the lowest common multiple of these numbers



- | | | |
|------|-------|------|
| A 24 | B 172 | C 94 |
| D 26 | E 22 | F 51 |

- 13 Find the lowest common multiple of these numbers

15, 8

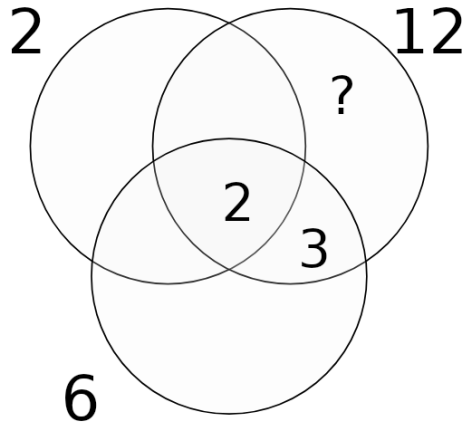
- | | | |
|-------|-------|-------|
| A 120 | B 240 | C 121 |
| D 122 | E 479 | F 61 |



Factoring and Lowest Common Multiple Advanced

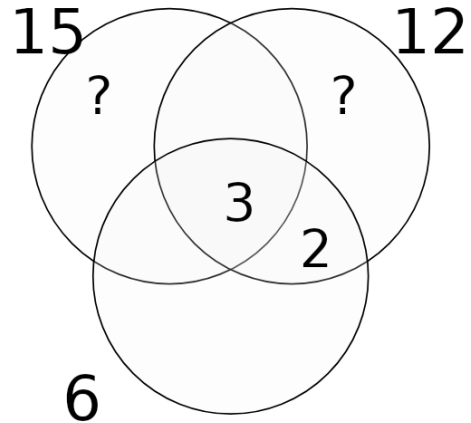


14 Complete the factor diagram and use it to find lowest common multiple of these numbers



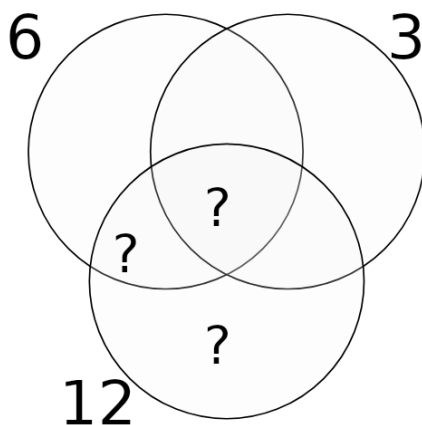
A	14	B	22	C	12
D	69	E	7	F	9

15 Complete the factor diagram and use it to find lowest common multiple of these numbers



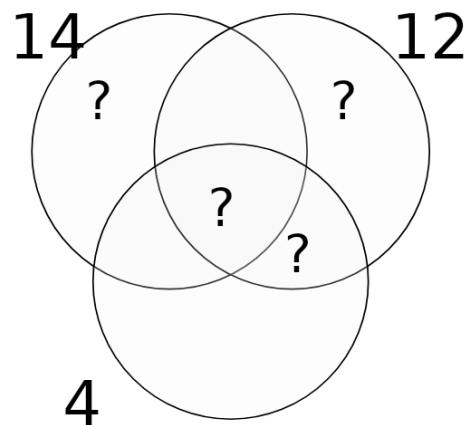
A	115	B	55	C	180
D	364	E	12	F	60

16 Use the factor diagram to find the lowest common multiple of these numbers



A	9	B	10	C	8
D	1	E	12	F	16

17 Use the factor diagram to find the lowest common multiple of these numbers



A	42	B	41	C	45
D	253	E	84	F	44



Factoring and Lowest Common Multiple Advanced

- 18** Find the lowest common multiple of these numbers from their factorization by choosing the set of all distinct factors

$$14(= 2 \times 7)$$

$$12(= 2 \times 2 \times 3)$$

$$8(= 2 \times 2 \times 2)$$

A	B	C
87	667	168
D	E	F
88	1,008	839

- 19** Find the lowest common multiple of these numbers from their factorization by choosing the set of all distinct factors

$$6(= 2 \times 3)$$

$$9(= 3 \times 3)$$

$$17(= 17)$$

A	B	C
1,225	2,142	101
D	E	F
151	305	306

- 20** Find the set of all the distinct prime factors of these numbers

4, 2, 7

A {2, 2, 7, 4}	B {2, 7, 6, 6, 3}
C {2, 5, 7}	D {2, 2, 7, 3}
E {2, 2, 7}	F {2, 2, 7, 2}

- 21** Find the set of all the distinct prime factors of these numbers

12, 10, 14

A {2, 2, 3, 5, 7, 4}	B {2, 2, 3, 5, 7}
C {2, 5, 3, 5, 7}	D {2, 2, 3, 3, 7}
E {2, 2, 3, 5, 6}	F {2, 3, 5, 7}

- 22** Find the set of all the distinct prime factors of these numbers

15, 14, 17

A {3, 5, 2, 7, 2}	B {3, 5, 2, 7, 17, 3}
C {3, 5, 2, 7, 6}	D {3, 5, 2, 7, 17}
E {3, 5, 2, 7, 17, 6}	F {3, 5, 2, 7, 17, 5}

- 23** Find the lowest common multiple of these numbers

6, 12, 10

A 34	B 60	C 55
D 27	E 58	F 364

- 24** Find the lowest common multiple of these numbers

11, 9, 12

A 194	B 396	C 1,188
D 199	E 791	F 790

- 25** Find the lowest common multiple of these numbers

12, 11, 10

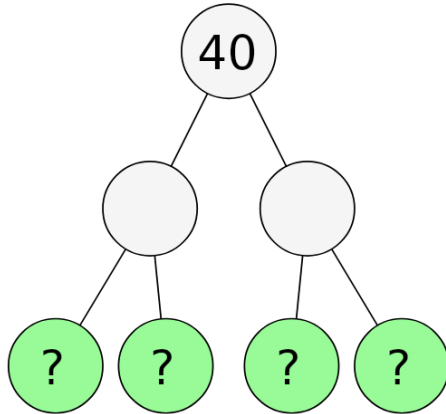
A 655	B 660	C 128
D 131	E 326	F 662



Factoring and Lowest Common Multiple Advanced



26 Finish the factor tree to find the prime factorization of this number



A $2 \times 2 \times 5$

B $2 \times 2 \times 2 \times 5 \times 11$

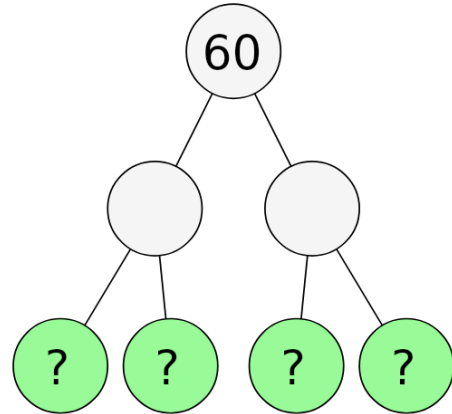
C $2 \times 2 \times 2 \times 3 \times 5$

D $2 \times 2 \times 2 \times 5 \times 5$

E $2 \times 2 \times 2 \times 5 \times 7$

F $2 \times 2 \times 2 \times 5$

27 Finish the factor tree to find the prime factorization of this number



A $2 \times 2 \times 2 \times 3 \times 5$

B $2 \times 6 \times 5$

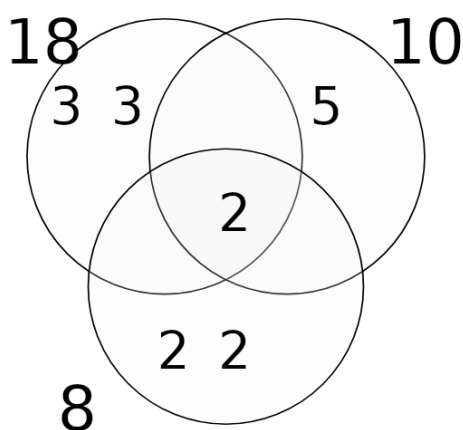
C $2 \times 2 \times 3 \times 3 \times 5$

D $2 \times 2 \times 3 \times 5 \times 5$

E $2 \times 2 \times 3 \times 5$

F $2 \times 2 \times 3$

28 Use the factor diagram to find the lowest common multiple of these numbers



A 2,158

B 67

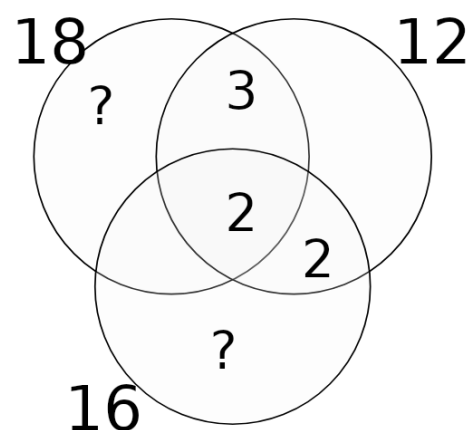
C 360

D 364

E 1,082

F 1,441

29 Complete the factor diagram and use it to find lowest common multiple of these numbers



A 75

B 862

C 431

D 143

E 722

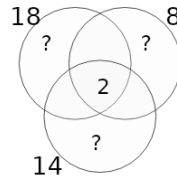
F 144



Factoring and Lowest Common Multiple Advanced

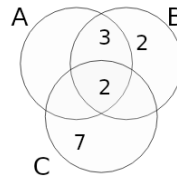


30 Complete the factor diagram and use it to find all the distinct factors of these numbers.



A	{2, 3, 3, 2, 2, 7, 5}	B	{2, 3, 3, 2, 7}	C	{2, 3, 3, 2, 2, 7, 3}
D	{3, 3, 3, 2, 2, 7}	E	{2, 3, 3, 2, 2, 7, 7}	F	{2, 3, 3, 2, 2, 7}

31 Find the numbers that this factor diagram represents

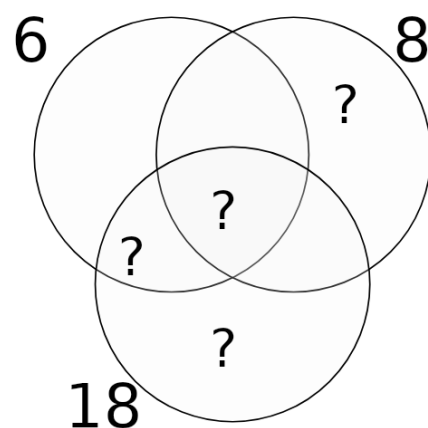


A	A=6, B=12, C=14	B	A=6, B=13, C=14	C	A=4, B=12, C=10
D	A=6, B=12, C=12	E	A=7, B=7, C=14	F	A=5, B=12, C=14

32 10, 8, 6

A	B	C
D	E	F

33 Use the factor diagram to find the lowest common multiple of these numbers



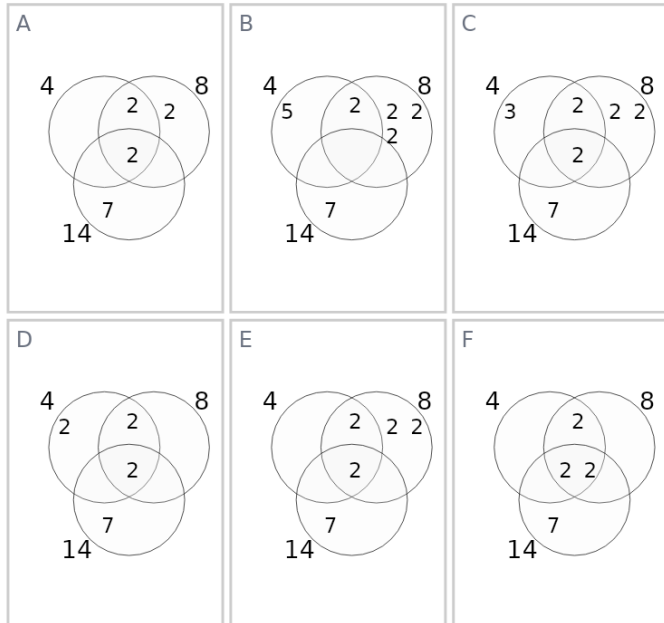
A	72	B	362	C	357
D	35	E	68	F	34



Factoring and Lowest Common Multiple Advanced



34 4, 8, 14



35 Show the prime factorization of this number

84

A {2, 2, 3, 7, 13}

B {2, 2, 21}

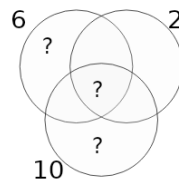
C {2, 2, 3, 7}

D {2, 2, 3, 7, 11}

E {2, 6, 7}

F {2, 2, 2, 3, 7}

36 Use the factor diagram to find all the distinct factors of these numbers.



A {4, 3, 5}

B {2, 3, 7}

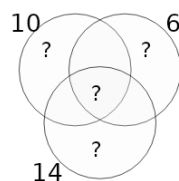
C {2, 6, 5}

D {2, 5}

E {2, 2, 5}

F {2, 3, 5}

37 Use the factor diagram to find all the distinct factors of these numbers.



A {2, 5, 3, 7, 7}

B {2, 5, 7}

C {2, 5, 3, 7, 3}

D {2, 5, 3, 7}

E {2, 5, 3, 7, 6}

F {2, 5, 3}