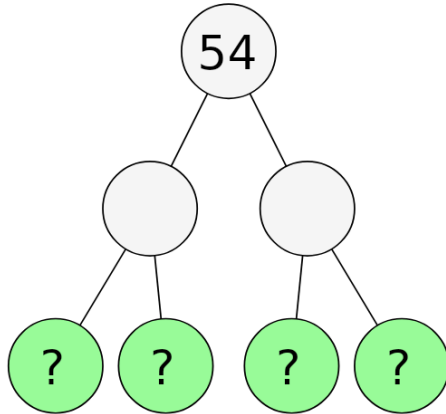




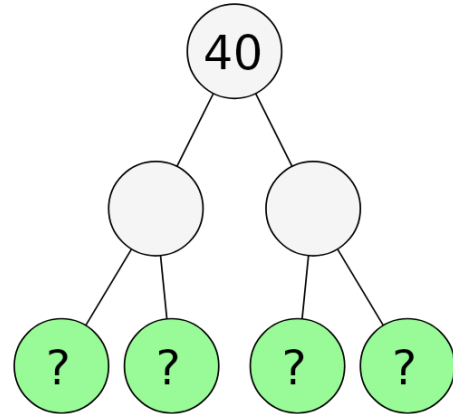
Factoring and Greatest Common Factor Advanced

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



- | | | |
|---|--|---|
| A $2 \times 3 \times 3 \times 3$ | B $2 \times 3 \times 9$ | C $2 \times 3 \times 3 \times 3 \times 3$ |
| D $2 \times 2 \times 3 \times 3 \times 3$ | E $2 \times 3 \times 3 \times 3 \times 11$ | F $3 \times 3 \times 3$ |

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



- | | | |
|--|---|---|
| A $2 \times 2 \times 2 \times 5 \times 11$ | B $2 \times 2 \times 2 \times 5 \times 5$ | C $2 \times 2 \times 5$ |
| D $2 \times 2 \times 2 \times 3 \times 5$ | E $2 \times 2 \times 2 \times 5$ | F $2 \times 2 \times 2 \times 5 \times 7$ |

- 3 Show the prime factorization of this number

40

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

- 4 Show the prime factorization of this number

36

- | | |
|--------------------|--------------------|
| A {2, 2, 3, 3, 11} | B {2, 2, 2, 3, 3} |
| C {2, 2, 3} | D {2, 2, 3, 3, 13} |
| E {2, 2, 3, 3} | F {2, 6, 3} |

- 5 Find the greatest common factor of these numbers

12, 4

- | | | |
|-----|------|-----|
| A 7 | B 21 | C 4 |
| D 5 | E 3 | F 1 |

- 6 Find the shared prime factors of these numbers

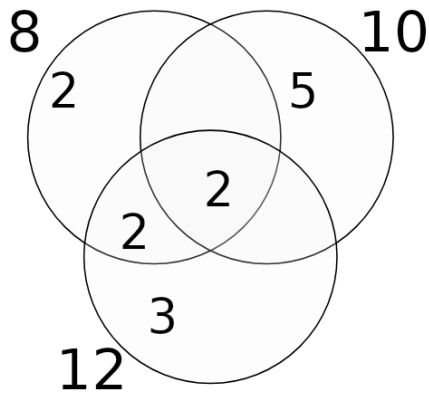
12, 8, 6

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



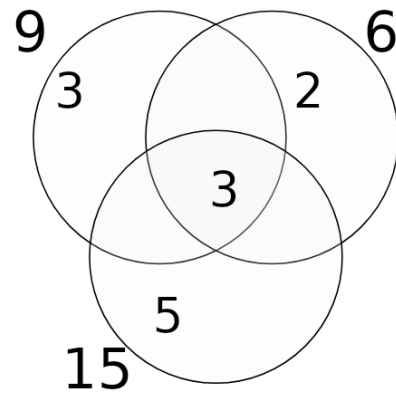
Factoring and Greatest Common Factor Advanced

- 7 Find the greatest common factor of these numbers by multiplying the shared factors in the center



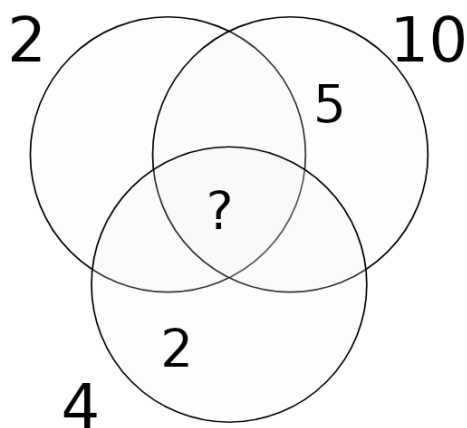
A 1	B 13	C 2
D 3	E 8	F 4

- 8 Find the greatest common factor of these numbers by multiplying the shared factors in the center



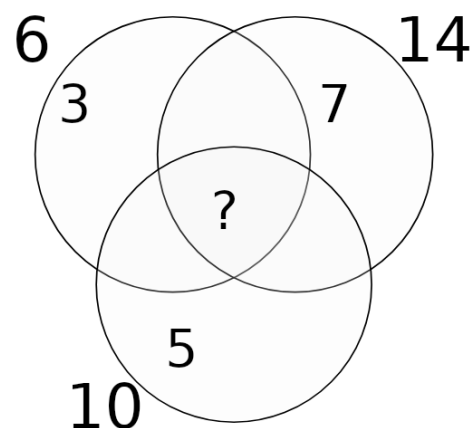
A 16	B 3	C 10
D 6	E 15	F 7

- 9 Complete the factor diagram and find the greatest common factor of these numbers



A 9	B 1	C 5
D 18	E 2	F 7

- 10 Complete the factor diagram and find the greatest common factor of these numbers

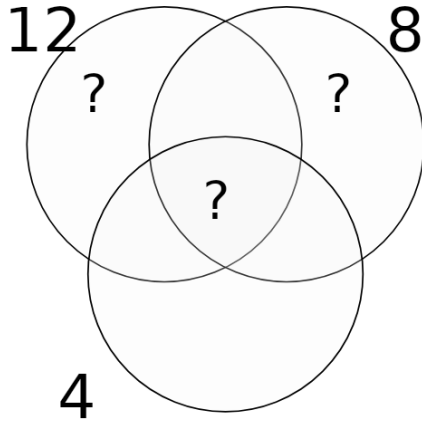


A 3	B 2	C 5
D 10	E 8	F 1



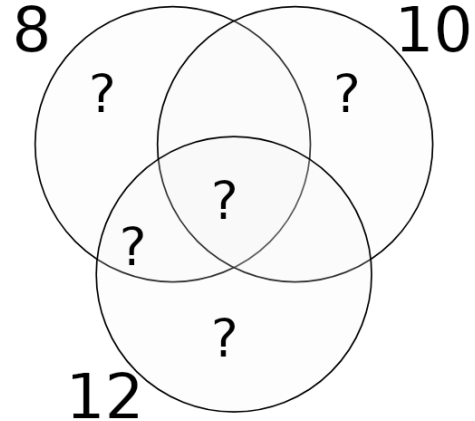
Factoring and Greatest Common Factor Advanced

11 Use the factor diagram to find the greatest common factor of these numbers



A 12	B 9	C 3
D 6	E 4	F 8

12 Use the factor diagram to find the greatest common factor of these numbers



A 1	B 16	C 13
D 7	E 12	F 2

13 Find the shared prime factors of these numbers

12, 15, 6

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

14 Find the shared prime factors of these numbers

18, 6, 10

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

15 Find the greatest common factor of these numbers

3, 9, 6

A 2	B 1	C 14
D 6	E 15	F 3

16 Find the greatest common factor of these numbers

6, 14, 4

A 11	B 4	C 2
D 6	E 16	F 15



Factoring and Greatest Common Factor Advanced

17 Find the greatest common factor of these numbers

6, 18, 15

A

18

B

9

C

3

D

4

E

5

F

10

18 Is 70 a factor of 462

A

No

B

Yes

19 Is 140 a factor of 924

A

Yes

B

No

20 Is 105 a factor of both 462 and 910?

A

No

B

Yes

21 Is 490 a factor of both 3234 and 2730?

A

No

B

Yes

22 Is z a factor of 490

A

No

B

Yes

23 Is b a factor of 2310

A

Yes

B

No

24 Is m a factor of both 210 and 462?

A

Yes

B

No





Factoring and Greatest Common Factor Advanced

30 Is 36 a factor of 630

A

No

B

Yes

31 Is 70 a factor of both 330 and 546?

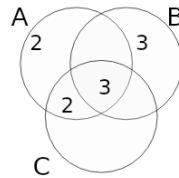
A

No

B

Yes

32 Find the numbers that this factor diagram represents



A A=12, B=9, C=6

B A=12, B=10, C=6

C A=9, B=8, C=10

D A=9, B=10, C=4

E A=13, B=9, C=4

F A=13, B=9, C=9

33 Is 150 a factor of both 2310 and 6825?

A

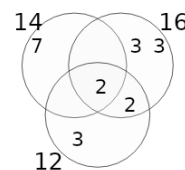
No

B

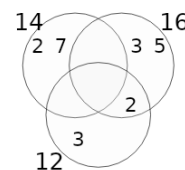
Yes

34 14, 16, 12

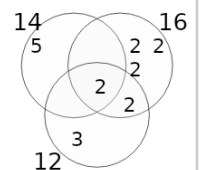
A



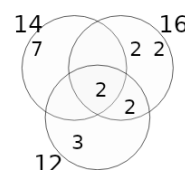
B



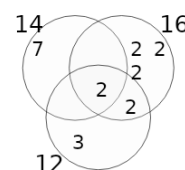
C



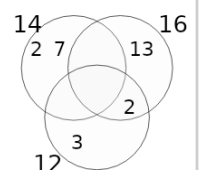
D



E



F



35 Show the prime factorization of this number

88

A {2, 2, 2, 11}

B {2, 2, 2}

C {2, 2, 11}

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

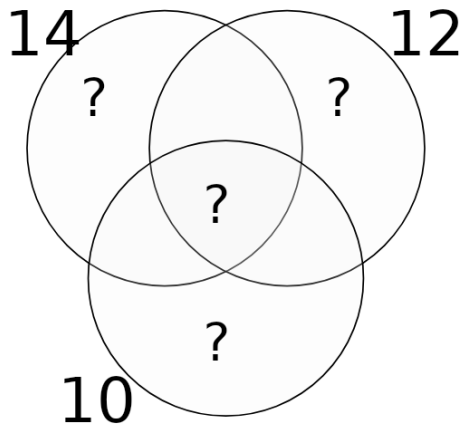
E {2, 4, 11}

F {2, 2, 22}



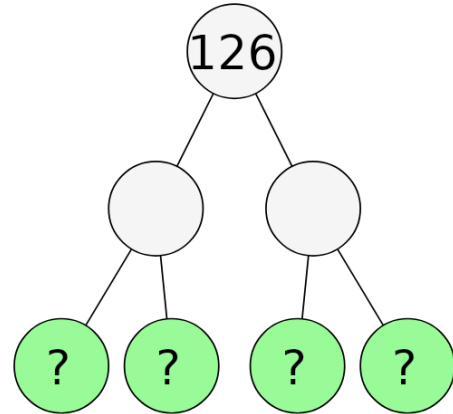
Factoring and Greatest Common Factor Advanced

36 Use the factor diagram to find the greatest common factor of these numbers



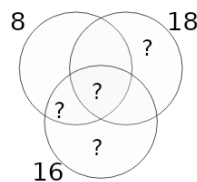
A 2	B 6	C 14
D 5	E 17	F 4

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



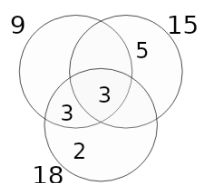
A $3 \times 3 \times 7$	B $2 \times 3 \times 3 \times 3 \times 7$	C $2 \times 9 \times 7$
D $2 \times 3 \times 3 \times 7 \times 13$	E $2 \times 3 \times 3 \times 7$	F $2 \times 3 \times 21$

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



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

39 Use the factor diagram to find the shared prime factors of these numbers (in the center)



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