Determine the greatest common factor (GCF) of each set of numbers.

To find the GCF of 12 & 16, first write down the factors of each number.

Factors of 12 1 , 2 , 3 , 4 , 6 , 12

Factors of 16 1 , 2 , 4 , 8 , 16

2 & 4 are factors both 12 and 16 have in common, with 4 being the greatest. So 4 is the GCF.

1) 3 , 18

Factors of 3 ____ , ____

Factors of 18 ____ , ____ , ____ , ____ , ____ , ____

2) 22 , 8

Factors of 22 ____ , ____ , ____ , ____

Factors of 8 ____ , ____ , ____ , ____

3) 36 , 3

Factors of 36 ____ , ____ , ____ , ____ , ____ , ____ , ____ , ____ , ____

Factors of 3 ____ , ____

4) 24 , 39

Factors of 24 ____ , ____ , ____ , ____ , ____ , ____ , ____ , ____

Factors of 39 ____ , ____ , ____ , ____

5) 30 , 8

Factors of 30 ____ , ____ , ____ , ____ , ____ , ____ , ____ , ____

Factors of 8 ____ , ____ , ____ , ____

6) 10 , 26

Factors of 10 ____ , ____ , ____ , ____

Factors of 26 ____ , ____ , ____ , ____

7) 36 , 14

Factors of 36 ____ , ____ , ____ , ____ , ____ , ____ , ____ , ____ , ____

Factors of 14 ____ , ____ , ____ , ____

8) 30 , 20

Factors of 30 ____ , ____ , ____ , ____ , ____ , ____ , ____ , ____

Factors of 20 ____ , ____ , ____ , ____ , ____ , ____

9) 18 , 42

Factors of 18 ____ , ____ , ____ , ____ , ____ , ____

Factors of 42 ____ , ____ , ____ , ____ , ____ , ____ , ____ , ____

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____

1-9	89	78	67	56	44	33	22	11	0

Determine the greatest common factor (GCF) of each set of numbers.

To find the GCF of 12 & 16, first write down the factors of each number.

Factors of 12 1 , 2 , 3 , 4 , 6 , 12

Factors of 16 1 , 2 , 4 , 8 , 16

2 & 4 are factors both 12 and 16 have in common, with 4 being the greatest. So 4 is the GCF.

1) 3 , 18

Factors of 3 1 , 3

Factors of 18 1 , 2 , 3 , 6 , 9 , 18

2) 22 , 8

Factors of 22 1 , 2 , 11 , 22

Factors of 8 1 , 2 , 4 , 8

3) 36 , 3

Factors of 36 1 , 2 , 3 , 4 , 6 , 9 , 12 , 18 , 36

Factors of 3 1 , 3

4) 24 , 39

Factors of 24 1 , 2 , 3 , 4 , 6 , 8 , 12 , 24

Factors of 39 1 , 3 , 13 , 39

5) 30 , 8

Factors of 30 1 , 2 , 3 , 5 , 6 , 10 , 15 , 30

Factors of 8 1 , 2 , 4 , 8

6) 10 , 26

Factors of 10 1 , 2 , 5 , 10

Factors of 26 1 , 2 , 13 , 26

7) 36 , 14

Factors of 36 1 , 2 , 3 , 4 , 6 , 9 , 12 , 18 , 36

Factors of 14 1 , 2 , 7 , 14

8) 30 , 20

Factors of 30 1 , 2 , 3 , 5 , 6 , 10 , 15 , 30

Factors of 20 1 , 2 , 4 , 5 , 10 , 20

9) 18 , 42

Factors of 18 1 , 2 , 3 , 6 , 9 , 18

Factors of 42 1 , 2 , 3 , 6 , 7 , 14 , 21 , 42

Answers

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

1-9	89	78	67	56	44	33	22	11	0

Determine the greatest common factor (GCF) of each set of numbers.

To find the GCF of 12 & 16, first write down the factors of each number.

Factors of 12 1 , 2 , 3 , 4 , 6 , 12

Factors of 16 1 , 2 , 4 , 8 , 16

2 & 4 are factors both 12 and 16 have in common, with 4 being the greatest. So 4 is the GCF.

1) 6 , 16

Factors of 6 ____ , ____ , ____ , ____

Factors of 16 ____ , ____ , ____ , ____ , ____

2) 9 , 36

Factors of 9 ____ , ____ , ____

Factors of 36 ____ , ____ , ____ , ____ , ____ , ____ , ____ , ____ , ____

3) 30 , 10

Factors of 30 ____ , ____ , ____ , ____ , ____ , ____ , ____ , ____

Factors of 10 ____ , ____ , ____ , ____

4) 24 , 16

Factors of 24 ____ , ____ , ____ , ____ , ____ , ____ , ____ , ____

Factors of 16 ____ , ____ , ____ , ____ , ____

5) 12 , 33

Factors of 12 ____ , ____ , ____ , ____ , ____ , ____

Factors of 33 ____ , ____ , ____ , ____

6) 20 , 10

Factors of 20 ____ , ____ , ____ , ____ , ____ , ____

Factors of 10 ____ , ____ , ____ , ____

7) 4 , 24

Factors of 4 ____ , ____ , ____

Factors of 24 ____ , ____ , ____ , ____ , ____ , ____ , ____ , ____

8) 24 , 14

Factors of 24 ____ , ____ , ____ , ____ , ____ , ____ , ____ , ____

Factors of 14 ____ , ____ , ____ , ____

9) 45 , 6

Factors of 45 ____ , ____ , ____ , ____ , ____ , ____

Factors of 6 ____ , ____ , ____ , ____

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____

1-9	89	78	67	56	44	33	22	11	0

Determine the greatest common factor (GCF) of each set of numbers.

To find the GCF of 12 & 16, first write down the factors of each number.

Factors of 12 1 , 2 , 3 , 4 , 6 , 12

Factors of 16 1 , 2 , 4 , 8 , 16

2 & 4 are factors both 12 and 16 have in common, with 4 being the greatest. So 4 is the GCF.

1) 6 , 16

Factors of 6 1 , 2 , 3 , 6

Factors of 16 1 , 2 , 4 , 8 , 16

2) 9 , 36

Factors of 9 1 , 3 , 9

Factors of 36 1 , 2 , 3 , 4 , 6 , 9 , 12 , 18 , 36

3) 30 , 10

Factors of 30 1 , 2 , 3 , 5 , 6 , 10 , 15 , 30

Factors of 10 1 , 2 , 5 , 10

4) 24 , 16

Factors of 24 1 , 2 , 3 , 4 , 6 , 8 , 12 , 24

Factors of 16 1 , 2 , 4 , 8 , 16

5) 12 , 33

Factors of 12 1 , 2 , 3 , 4 , 6 , 12

Factors of 33 1 , 3 , 11 , 33

6) 20 , 10

Factors of 20 1 , 2 , 4 , 5 , 10 , 20

Factors of 10 1 , 2 , 5 , 10

7) 4 , 24

Factors of 4 1 , 2 , 4

Factors of 24 1 , 2 , 3 , 4 , 6 , 8 , 12 , 24

8) 24 , 14

Factors of 24 1 , 2 , 3 , 4 , 6 , 8 , 12 , 24

Factors of 14 1 , 2 , 7 , 14

9) 45 , 6

Factors of 45 1 , 3 , 5 , 9 , 15 , 45

Factors of 6 1 , 2 , 3 , 6

Answers

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

1-9	89	78	67	56	44	33	22	11	0

Find the least common multiple of both numbers.

To find the least common multiple one strategy is to list the multiples of the numbers.

4	4	8	12	16	20	24	28	32	36	40	44	48
6	6	12	18	24	30	36	42	48	54	60	66	72

Some of the multiples 4 and 6 have in common are: 12, 24, 36 & 48.
The common multiple that is least is 12.

1) 8 ____ ____ ____ ____ ____ ____ ____ ____
3 ____ ____ ____ ____ ____ ____ ____ ____

2) 12 ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
10 ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____

3) 4 ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
11 ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____

4) 5 ____ ____ ____ ____ ____
2 ____ ____ ____ ____ ____

5) 8 ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
12 ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____

6) 4 ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
10 ____ ____ ____ ____ ____ ____ ____ ____ ____ ____

7) 5 ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
10 ____ ____ ____ ____ ____ ____ ____ ____ ____ ____

8) 8 ____ ____ ____ ____ ____ ____ ____ ____
5 ____ ____ ____ ____ ____ ____ ____ ____

9) 2 ____ ____ ____ ____
4 ____ ____ ____ ____

10) 9 ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
12 ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____

Answers

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

1-10	90	80	70	60	50	40	30	20	10	0

Find the least common multiple of both numbers.

To find the least common multiple one strategy is to list the multiples of the numbers.

4	4	8	12	16	20	24	28	32	36	40	44	48
6	6	12	18	24	30	36	42	48	54	60	66	72

Some of the multiples 4 and 6 have in common are: 12, 24, 36 & 48.
The common multiple that is least is 12.

1)

8	8	16	24	32	40	48	56	64
3	3	6	9	12	15	18	21	24

2)

12	12	24	36	48	60	72	84	96	108	120	132	144
10	10	20	30	40	50	60	70	80	90	100	110	120

3)

4	4	8	12	16	20	24	28	32	36	40	44
11	11	22	33	44	55	66	77	88	99	110	121

4)

5	5	10	15	20	25
2	2	4	6	8	10

5)

8	8	16	24	32	40	48	56	64	72	80	88	96
12	12	24	36	48	60	72	84	96	108	120	132	144

6)

4	4	8	12	16	20	24	28	32	36	40
10	10	20	30	40	50	60	70	80	90	100

7)

5	5	10	15	20	25	30	35	40	45	50
10	10	20	30	40	50	60	70	80	90	100

8)

8	8	16	24	32	40	48	56	64
5	5	10	15	20	25	30	35	40

9)

2	2	4	6	8
4	4	8	12	16

10)

9	9	18	27	36	45	54	63	72	81	90	99	108
12	12	24	36	48	60	72	84	96	108	120	132	144

Answers

1. **24**
2. **60**
3. **44**
4. **10**
5. **24**
6. **20**
7. **10**
8. **40**
9. **4**
10. **36**

1-10	90	80	70	60	50	40	30	20	10	0

Find the least common multiple of both numbers.

To find the least common multiple one strategy is to list the multiples of the numbers.

4	4	8	12	16	20	24	28	32	36	40	44	48
6	6	12	18	24	30	36	42	48	54	60	66	72

Some of the multiples 4 and 6 have in common are: 12, 24, 36 & 48.
The common multiple that is least is 12.

1) 3 ____ ____ ____ ____ ____ ____ ____ ____
8 ____ ____ ____ ____ ____ ____ ____ ____

2) 6 ____ ____ ____ ____ ____ ____
5 ____ ____ ____ ____ ____ ____

3) 11 ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
6 ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____

4) 5 ____ ____ ____ ____ ____ ____ ____ ____ ____
9 ____ ____ ____ ____ ____ ____ ____ ____ ____

5) 11 ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
3 ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____

6) 11 ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
10 ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____

7) 3 ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
12 ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____

8) 2 ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
10 ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____

9) 5 ____ ____ ____ ____ ____ ____ ____ ____ ____ ____
10 ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____

10) 9 ____ ____ ____ ____ ____ ____ ____ ____ ____
2 ____ ____ ____ ____ ____ ____ ____ ____ ____

Answers

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

1-10	90	80	70	60	50	40	30	20	10	0

Find the least common multiple of both numbers.

To find the least common multiple one strategy is to list the multiples of the numbers.

4	4	8	12	16	20	24	28	32	36	40	44	48
6	6	12	18	24	30	36	42	48	54	60	66	72

Some of the multiples 4 and 6 have in common are: 12, 24, 36 & 48.
The common multiple that is least is 12.

1)

3	3	6	9	12	15	18	21	24
8	8	16	24	32	40	48	56	64

2)

6	6	12	18	24	30	36
5	5	10	15	20	25	30

3)

11	11	22	33	44	55	66	77	88	99	110	121
6	6	12	18	24	30	36	42	48	54	60	66

4)

5	5	10	15	20	25	30	35	40	45
9	9	18	27	36	45	54	63	72	81

5)

11	11	22	33	44	55	66	77	88	99	110	121
3	3	6	9	12	15	18	21	24	27	30	33

6)

11	11	22	33	44	55	66	77	88	99	110	121
10	10	20	30	40	50	60	70	80	90	100	110

7)

3	3	6	9	12	15	18	21	24	27	30	33	36
12	12	24	36	48	60	72	84	96	108	120	132	144

8)

2	2	4	6	8	10	12	14	16	18	20
10	10	20	30	40	50	60	70	80	90	100

9)

5	5	10	15	20	25	30	35	40	45	50
10	10	20	30	40	50	60	70	80	90	100

10)

9	9	18	27	36	45	54	63	72	81
2	2	4	6	8	10	12	14	16	18

Answers

1. **24**
2. **30**
3. **66**
4. **45**
5. **33**
6. **110**
7. **12**
8. **10**
9. **10**
10. **18**

1-10	90	80	70	60	50	40	30	20	10	0

Finding Prime Factors

Name:

Find the prime factors for each number.

1) 47 = _____

2) 59 = _____

3) 98 = _____

4) 27 = _____

5) 99 = _____

6) 75 = _____

7) 59 = _____

8) 93 = _____

9) 51 = _____

10) 62 = _____

11) 22 = _____

12) 95 = _____

13) 94 = _____

14) 86 = _____

15) 25 = _____

16) 60 = _____

17) 89 = _____

18) 52 = _____

19) 8 = _____

20) 11 = _____

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

1-10	95	90	85	80	75	70	65	60	55	50
11-20	45	40	35	30	25	20	15	10	5	0

Name: **Answer Key**

Find the prime factors for each number.

1) 47 = 47

2) 59 = 59

3) 98 = 2×7×7

4) 27 = 3×3×3

5) 99 = 3×3×11

6) 75 = 3×5×5

7) 59 = 59

8) 93 = 3×31

9) 51 = 3×17

10) 62 = 2×31

11) 22 = 2×11

12) 95 = 5×19

13) 94 = 2×47

14) 86 = 2×43

15) 25 = 5×5

16) 60 = 2×2×3×5

17) 89 = 89

18) 52 = 2×2×13

19) 8 = 2×2×2

20) 11 = 11

Answers

1. **47**
2. **59**
3. **2×7×7**
4. **3×3×3**
5. **3×3×11**
6. **3×5×5**
7. **59**
8. **3×31**
9. **3×17**
10. **2×31**
11. **2×11**
12. **5×19**
13. **2×47**
14. **2×43**
15. **5×5**
16. **2×2×3×5**
17. **89**
18. **2×2×13**
19. **2×2×2**
20. **11**

1-10	95	90	85	80	75	70	65	60	55	50
11-20	45	40	35	30	25	20	15	10	5	0

Find the prime factors for each number.

1) 49 = _____

2) 98 = _____

3) 75 = _____

4) 87 = _____

5) 45 = _____

6) 24 = _____

7) 49 = _____

8) 72 = _____

9) 39 = _____

10) 62 = _____

11) 11 = _____

12) 62 = _____

13) 9 = _____

14) 94 = _____

15) 31 = _____

16) 34 = _____

17) 26 = _____

18) 95 = _____

19) 86 = _____

20) 58 = _____

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

1-10	95	90	85	80	75	70	65	60	55	50
11-20	45	40	35	30	25	20	15	10	5	0

Find the prime factors for each number.

1) 49 = 7×7
2) 98 = 2×7×7
3) 75 = 3×5×5
4) 87 = 3×29
5) 45 = 3×3×5
6) 24 = 2×2×2×3
7) 49 = 7×7
8) 72 = 2×2×2×3×3
9) 39 = 3×13
10) 62 = 2×31
11) 11 = 11
12) 62 = 2×31
13) 9 = 3×3
14) 94 = 2×47
15) 31 = 31
16) 34 = 2×17
17) 26 = 2×13
18) 95 = 5×19
19) 86 = 2×43
20) 58 = 2×29

Answers

1. 7×7
2. 2×7×7
3. 3×5×5
4. 3×29
5. 3×3×5
6. 2×2×2×3
7. 7×7
8. 2×2×2×3×3
9. 3×13
10. 2×31
11. 11
12. 2×31
13. 3×3
14. 2×47
15. 31
16. 2×17
17. 2×13
18. 5×19
19. 2×43
20. 2×29

1-10	95	90	85	80	75	70	65	60	55	50
11-20	45	40	35	30	25	20	15	10	5	0