Lesson 1.2   Prime Factorization

Circle all the prime numbers in the table.

1.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Express each number as a product of its prime factors.

2. 28 _____

3. 39 _____

4. 54 _____

5. 68 _____

6. 92 _____

7. 105 _____

8. 165 _____

9. 210 _____

10. 245 _____   **11.** 330 _____

12. 490 _____   **13.** 580 _____

14. 858 _____   **15.** 1,020 _____

16. 1,575 _____   **17.** 1,638 _____

Solve.

18. Given that 640 written as a product of its prime factors is 2 × 2 × 2 × 2 × 2 × 2 × 2 × 5, write 1,280 as a product of its prime factors.

19. 750 written as a product of its prime factors is 2 × 3 × 5 × 5 × 5. Write 3000 as a product of its prime factors.

20. 5,100 written as a product of its prime factors is 2 × 2 × 3 × 5 × 5 × 17. Write 1,700 as a product of its prime factors.

21. It is given that 6,300 can be expressed in terms of its prime factors as 2 × 2 × 3 × 3 × 5 × 5 × 7.
a) Write 900 as a product of its prime factors.

b) Write 700 as a product of its prime factors.