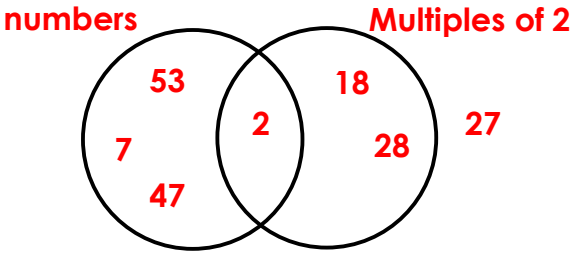
Reasoning and Problem Solving
Prime Numbers

Developing

1a. 26, 27, 62, 69, 72, 76, 92, 96

2a.

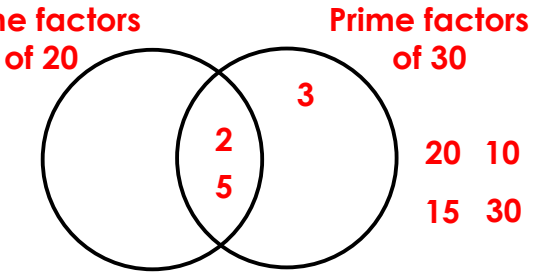


3a. True; 29 is only divisible by itself and 1 therefore it is a prime number. There is no larger prime number less than 30.

Expected

4a. 4, 6, 14, 16, 34, 36, 46

5a.

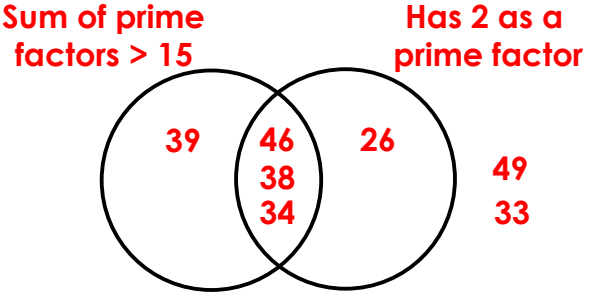


6a. False; 25, 35 and 49 do not have 3 as a prime factor.

Greater Depth

7a. 34 and 46

8a.



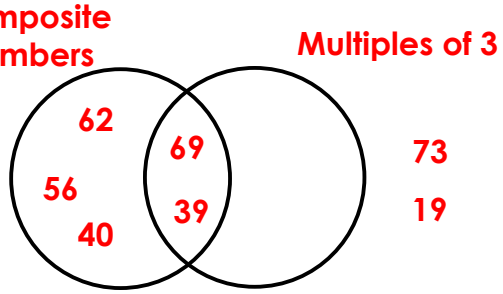
9a. False; all 2-digit even composite numbers have a prime factor of 2, all 2-digit odd composite numbers do not have a prime factor of 2.

Reasoning and Problem Solving
Prime Numbers

Developing

1b. 14, 18, 34, 38, 48, 81, 84

2b.

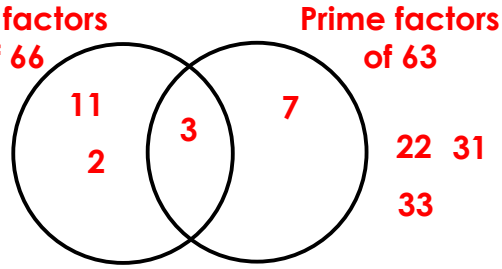


3b. False; while 2 is the only even prime number, many odd numbers are composite, for example, 15 is a multiple of 3 and 5.

Expected

4b. 12, 18, 21, 27

5b.

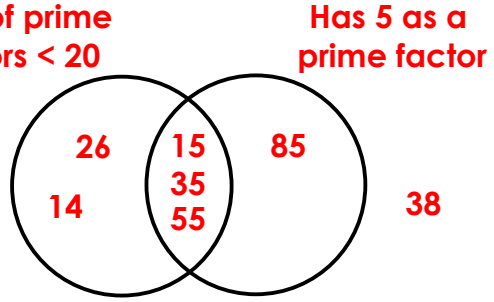


6b. True; all other prime numbers are odd, for example, 3, 5 and 7. All other even numbers are composite as they can be divided by 2.

Greater Depth

7b. 15, 21, 25 and 35

8b.



9b. False; the sum of the prime factors of any composite number can be odd or even. For example, the prime factors of 10 are 2 and 5 which make 7 altogether however the prime factors of 15 are 3 and 5 which make 8 altogether.

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