



Number Theory

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- 3 p is the largest prime number between 50 and 100.
 q is the smallest prime number between 50 and 100.

Calculate the value of $p - q$

Answer [2]



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2 Which of the following numbers are irrational?

$$\frac{2}{3} \quad \sqrt{36} \quad \sqrt{3} + \sqrt{6} \quad \pi \quad 0.75 \quad 48\% \quad 8^{\frac{1}{3}}$$

Answer [2]

2 210 211 212 213 214 215 216

From the list of numbers, find

(a) a prime number,

Answer(a) [1]

(b) a cube number.

Answer(b) [1]

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- 11 List all the **prime numbers** which satisfy this inequality.

$$16 < 2x - 5 < 48$$

Answer [3]

5) June 2013 V3

- 11 The sum of the prime numbers less than 8 is equal to 17.

- (a) Find the sum of the prime numbers less than 21.

Answer(a) [2]

- (b) The sum of the prime numbers less than x is 58.

Find an integer value for x

Answer(b) $x =$ [2]

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5 8 9 10 11 12 13 14 15 16

From the list of numbers, write down

(a) the square numbers,

..... [1]

(b) a prime factor of 99.

[1]

7) June 2016 V3

1 Find the cube root of 4913.

..... [1]

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8) November 2015 V3

5

11

12

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16

From the list of numbers, write down

(a) the factors of 60,

Answer(a) [1]

(b) the prime numbers.

Answer(b) [1]

9) November 2014 V2

15 (a) Write 90 as a product of prime factors.

Answer(a) [2]

(b) Find the lowest common multiple of 90 and 105.

Answer(b) [2]

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10) June 2015 V1

17 (a) Write 30 as a product of its prime factors.

Answer(a) [2]

(b) Find the lowest common multiple (LCM) of 30 and 45.

Answer(b) [2]

11) November 2015 V1

7 Work out the highest common factor (HCF) of 36 and 90.

Answer [2]

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- 2 Find the lowest common multiple (LCM) of 24 and 32.

Answer

[2]



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13) March 2016 V2

13 (a) Write 2016 as the product of prime factors.

..... [3]

(b) Write 2016 in standard form.

..... [1]

14) June 2016 V1

6 Find the lowest common multiple (LCM) of 36 and 48.

..... [2]

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10 Find the highest common factor (HCF) of 56 and 70.

..... [2]

15) November 2020 V2

2 Insert one pair of brackets to make this calculation correct.

$$7 - 5 - 3 + 4 = 9$$

$x =$ [2]

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