

Year 5: Putting it all together: clues and reasoning: worksheet

Year 5 - Prime Numbers, Factors, Squares and Cubes - Lesson 3.7

Name: _____

Date: _____

Score: _____

13 questions. Write your answers in the spaces. Answers and step-by-step help are free at websink.site/ks2-sats/maths/year-5/ch03-factors-primes-squares-cubes/putting-it-all-together-clues-and-reasoning/

Exercise 31 Number clues and reasoning Non-calculator

- 1** I am a multiple of 7 between 50 and 80. I am an odd number. My digits add up to 9. What number am I?

Answer: _____

- 2** I am a factor of 36. I am an even number. I am a multiple of 3. I am between 8 and 15. What number am I?

Answer: _____

- 3** I am a prime number between 50 and 70. My digits add up to 8. What number am I?

Answer: _____

- 4** I am a square number between 100 and 1,000. I am a multiple of 5 and a multiple of 6. What number am I?

Answer: _____

- 5** Find all the numbers with exactly...

(a) 2 factors, up to 20

Answer: _____

(b) 3 factors, up to 30

Answer: _____

(c) 4 factors, up to 20

Answer: _____

- 6** Which numbers between 50 and 100 have the most factors? How many factors is that?

Answer: _____

- 7** One lighthouse flashes every 6 seconds. Another lighthouse flashes every 9 seconds. They flash together now (at 0 seconds).

(a) After how many seconds do they next flash together?

Answer: _____

(b) How many times do they flash together in the next 2 minutes (120 seconds), not counting the start?

Answer: _____

- 8** Three buses leave a stop at 8:00 am. Bus 1 leaves every 3 minutes, bus 2 every 5 minutes and bus 3 every 6 minutes. After how many minutes do all three buses leave together again?

Answer: _____

- 9** Prove it! Show that 93 is not a prime number.

Answer: _____

- 10** Always, sometimes or never?

(a) A multiple of 4 is a multiple of 8.

Answer:

(b) A factor of 12 is a factor of 24.

Answer:

(c) A cube number is an even number.

Answer:

11 Which number is the odd one out? Explain. 16 36 64 50

Answer:

12 Zainab says, "The lowest common multiple of 5 and 6 is 11, because $5 + 6 = 11$." Is Zainab right? Explain.

Answer:

13 Challenge! Find the number less than 50 that has exactly five factors.

Answer: