

1. Sandra uses 2 erasers for 15 questions.
Sandra uses 4 erasers for 30 questions.
...
Sandra uses 12 erasers for 90 questions.

That's one pack so far. Since there are 10 more questions (to get 100 questions), she needs one more pack.

A. 2

2. The tens digit may be 2, 4, 6, or 8, and the ones digit may be 0, 2, 4, 6, or 8. That's $4 \times 5 = 20$ such whole numbers.

20 22 24 26 28 40 42 44 46 48 60 62 64 66 68
80 82 84 86 88

B. 20

3. Noah scores $2 \times 7 = 14$ goals each week. Since $56 \div 14 = 4$, it will take Noah 4 weeks to score 56 goals.

B. 4

4. Chris ran each lap in 90 seconds. After running for 6 minutes = 360 seconds, he had run $360 \div 90 = 4$ laps. He had 6 laps left to run.

D. 6



5. The pairs are 41 and 59, 42 and 58, 43 and 57, 44 and 56, 45 and 55, 46 and 54, 47 and 53, 48 and 52, and 49 and 51. There are 9 such pairs.

A. 9

6. $2 \times 4 \times 5 \times 25 = (2 \times 5) \times (4 \times 25) = 10 \times 100$.

D. 10×100

7. Any number divisible by both 4 and 6 must be divisible by the least common multiple of 4 and 6, which is 12.

There are 8 multiples of 12 between 100 and 200.

108, 120, 132, 144, 156, 168, 180, 192

C. 8

8. Joey can have at most 4 large boxes since each large box contains 4 small boxes. If Joey has 4 large boxes, he has $4 \times 4 = 16$ small boxes, for a total of 20 boxes.

D. 16



9. Divide the answer choices by 6 and by 5. Find the choice that leaves a remainder of 2 when divided by 6 and a remainder of 3 when divided by 5. Since 38 is the only choice that satisfies these conditions, choice D is correct.

D. 38

10. The 2 prime numbers between 20 and 30 are 23 and 29.
The 2 prime numbers between 30 and 40 are 31 and 37.
The 3 prime numbers between 40 and 50 are 41, 43, and 47.
The 2 prime numbers between 50 and 60 are 53 and 59.

C. 40 and 50

11. Simona has only dimes (\$0.10) and quarters (\$0.25). To get exactly one dollar, she must have two quarters and five dimes. She has a total of 7 coins.

B. 7



12. Briana can solve 6 cubes in 240 seconds (= 4 minutes), so she can solve 1 in 40 seconds. Avima can solve 5 cubes in 360 seconds, so she can solve or 1 in 72 seconds. Briana can solve 1 cube 32 seconds more quickly than Avima can.

D. 32

13. 2018 is the product of the primes 1009 and 2.

A. 2018

14. As shown, eleven 1-by-3 rectangles can fit in a 5-by-7 rectangle.

C. 11

