Math Fundamentals Drill

Test your new skills and check your answers in Part V.

If a prime number, p, is squared and the result is added to the next prime number greater than p, which of the following integers could be the resulting sum?

Indicate all such integers.

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- ☐ 3
- ☐ 4
- ☐ 7
- ☐ 14
- ☐ 58
- ☐ 60
- ☐ 65
- ☐ 69

A bookstore will only order books that come in complete cases. Each case has 150 books and costs $1,757.

Quantity A	Quantity B
The number of books that can be ordered for $10,550	The number of books that can be ordered for $12,290

- ○ Quantity A is greater.
- ○ Quantity B is greater.
- ○ The two quantities are equal.
- ○ The relationship cannot be determined from the information given.

If the product of two distinct integers is 91, then which of the following could be the sum of the two integers?

Indicate all such sums.

- ☐ −92
- ☐ −91
- ☐ 7
- ☐ 13
- ☐ 20

Which of the following is the units digit for the sum of all of the distinct prime integers less than 20?

- ○ 4
- ○ 5
- ○ 6
- ○ 7
- ○ 8

During a sale, a store decreases the prices on all of its scarves by 25 to 50 percent. If all of the scarves in the store were originally priced at $20, which of the following prices could be the sale price of a scarf?

Indicate all such prices.

- ☐ $8
- ☐ $10
- ☐ $12
- ☐ $14
- ☐ $16

$$-2, 3, -5, -2, 3, -5, -2, 3, -5,...$$

In the sequence above, the first 3 terms repeat without end. What is the product of the 81st term through the 85th term?

Quantity A	Quantity B
$4\left(\dfrac{1}{2}x + 2y\right)$	$2x + 8y$

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

Quantity A	Quantity B
The greatest number of consecutive nonnegative integers which have a sum less than 22	6

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

If x is the remainder when a multiple of 4 is divided by 6, and y is the remainder when a multiple of 2 is divided by 3, what is the greatest possible value of $x + y$?

○ 2

○ 3

○ 5

○ 6

○ 9

$$12 - \left(\dfrac{6}{3} - 4 \times 3\right) - 8 \times 3 =$$

○ −46

○ −30

○ −18

○ −6

○ −2