

- One side of a rectangle is 35 cm (centimeters) long. How long is the other side if the area of the rectangle is 700 cm^2 ?
A) 315 cm B) 200 cm C) 20 cm D) 630 cm E) 665 cm
- Which of the following expressions, when simplified, gives us the result -44 ?
A) $2 - 5(3 - 7)$ B) $(2 - 5)(3 - 7)$ C) $2 - 5(3(-7))$ D) $2(-5(3) - 7)$ E) $(2 - 5)(3) - 7$
- Simplify: $\frac{-3^2 - 1 + 10}{-2^2 - (-2)^2}$
A) $-\frac{1}{4}$ B) $\frac{5}{2}$ C) $\frac{9}{4}$ D) 0 E) undefined
- Re-write 120% as a fraction in lowest terms.
A) $\frac{3}{25}$ B) $1\frac{2}{10}$ C) $\frac{6}{5}$ D) $\frac{12}{25}$ E) $1\frac{1}{6}$
- Re-write $5\frac{7}{10}$ as an improper fraction.
A) $\frac{12}{10}$ B) $\frac{57}{10}$ C) $\frac{35}{10}$ D) $\frac{75}{10}$ E) $\frac{22}{10}$
- Simplify $15 - 5(8 - 2(-3)) + 12 \div 3 \cdot 2$
A) 22 B) 28 C) -53 D) -47 E) 148
- Simplify $-2^2 + (-2)^2 - |-5| - (-1)^2 + 1^4$
A) -5 B) 7 C) 13 D) 15 E) 18
- Consider the equation $-x + x^3 = -x^2 + 4 + 3x$. Which of the following numbers is NOT a solution of the equation?
A) -2 B) -1 C) 1 D) 2 E) They are all solutions.
- Consider the inequality $\frac{2x - 5}{3} + 1 \leq x + 1$. Which of the following numbers is NOT a solution of it?
A) -8 B) -5 C) 1 D) 7 E) 13
- Last night, there were 600 000 viruses in the sample. By this morning, we observed a 20% increase. What is the number of viruses now?
A) 720 000 B) 612 000 C) 120 000 D) 1200 000 E) 12 000 000

11. Peter is thinking of a number. If we add 6 to this number and then multiply this sum by 5, the result is 20. Which of the following equations expresses the statement above?
- A) $6x + 5 = 20$ C) $5(x + 6) = 20$ E) none of the above
 B) $6(x + 5) = 20$ D) $5x + 6 = 20$
12. M is three greater than four times the opposite of P . Which of the following expresses this statement?
- A) $M + 3 = 4 - P$ C) $M + 3 = 4(-P)$ E) $M = 4(-P) + 3$
 B) $M = -4P - 3$ D) $M = 4P + 3$
13. Find a number with the following property: three times the number is twelve less than the opposite of -24 .
- A) -12 B) -4 C) 4 D) 12 E) 20
14. The store opened with 960 toys in its inventory. During the morning shift, the store sold $\frac{2}{5}$ of its inventory. During the afternoon shift, it sold $\frac{1}{3}$ of the remaining toys. How many toys were in the store at closing time?
- A) 128 B) 192 C) 256 D) 384 E) 64
15. Which of the following pictures depicts the triangle ABC determined by the points $A(-2, -3)$, $B(3, 2)$ and $C(-2, 3)$?

