

59. For all nonzero x , y , and z such that $x = yz$, which of the following *must* be equivalent to xy ?

- A. $\frac{z}{x}$
- B. yz^2
- C. yz
- D. $\frac{x^2}{z}$
- E. $\frac{x}{y}$

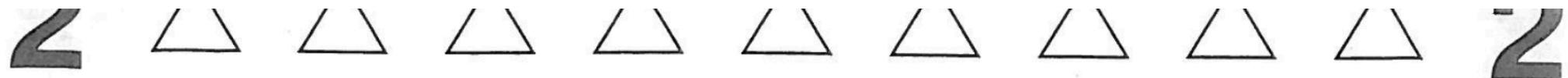
$$x = x$$
$$y = \frac{x}{z}$$

$$xy = x\left(\frac{x}{z}\right) = \frac{x^2}{z}$$

Solving for
variables using
substitution

$$625(1) = (?)^2$$
$$\sqrt{625} = \sqrt{?^2}$$
$$25 = ?$$

- 59.** For all real numbers b and c such that the product of c and 3 is b , which of the following expressions represents the sum of c and 3 in terms of b ?
- A. $b + 3$
- B. $3b + 3$
- C. $3(b + 3)$
- D. $\frac{b + 3}{3}$
- E. $\frac{b}{3} + 3$



57. If $x + y = 6$, then $x^2 = ?$

- E
- A. $y^2 - 12y - 36$
 - B. $y^2 - 36$
 - C. $6 - y^2$
 - D. $36 - y^2$
 - E. $36 - 12y + y^2$
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DO YOUR FIGURING HERE.

$$x + y = 6 \quad \text{therefore} \quad x^2 = (6-y)^2 = 36 - 12y + y^2$$
$$x = 6 - y$$

48. What is the value of $(x + 2)(x - 3) + 5$ when
 $x^2 - x - 6 = -4$?

- F. -2
G. -1
H. 1
J. 2
K. 3

$$(x + 2)(x - 3) = x^2 - x - 6 = -4$$

Substitute $(x + 2)(x - 3)$ with -4

$$(-4) + 5 = 1$$

57. If $x + y = 6$, then $x^2 = ?$

- E
A. $y^2 - 12y - 36$
B. $y^2 - 36$
C. $6 - y^2$
D. $36 - y^2$
E. $36 - 12y + y^2$

$x + y = 6$ therefore $x^2 = (6-y)^2 = 36 - 12y + y^2$

DO YOUR FIGURING HERE.