

4. Solve: $\frac{1}{6}(30x + 24) - \frac{1}{7}(63 - 7x) = 37$.

a. $x = 7$

b. $x = 4$

c. $x = 11$

d. $x = 6$

ANS: A

$$\frac{1}{6}(30x + 24) - \frac{1}{7}(63 - 7x) = 37$$

$$5x + 4 - 9 + x = 37$$

$$6x - 5 = 37$$

$$6x = 37 + 5$$

$$6x = 42$$

$$x = 7$$

PTS: 2

DIF: Grade 8

REF: 1AL1.3

OBJ: Simplify or evaluate linear expressions in one variable with integer, fraction and decimal coefficients.

TOP: Algebra I

KEY: algebraic manipulation | rational numbers | solve

MSC: Dynamic

5. Solve: $\frac{1}{4}(12x + 28) - (3 - 6x) = 31$.

a. $x = 3$

b. $x = 2$

c. $x = -9$

d. $x = -7$

ANS: A

$$\frac{1}{4}(12x + 28) - (3 - 6x) = 31$$

$$3x + 7 - 3 + 6x = 31$$

$$9x + 4 = 31$$

$$9x = 31 - 4$$

$$9x = 27$$

$$x = 3$$

PTS: 2

DIF: Grade 8

REF: 1AL1.3

OBJ: Simplify or evaluate linear expressions in one variable with integer, fraction and decimal coefficients.

TOP: Algebra I

KEY: algebraic manipulation | rational numbers | solve

MSC: Dynamic

8. Solve: $\frac{5}{8}(8x + 16) - (3 - x) \leq 31$.

a. $x \leq 4$

c. $x \leq 6$

b. $x \leq 3$

d. $x \leq 5$

ANS: A

$$\frac{5}{8}(8x + 16) - (3 - x) \leq 31$$

$$5x + 10 - 3 + x \leq 31$$

$$6x + 7 \leq 31$$

$$6x \leq 31 - 7$$

$$6x \leq 24$$

$$x \leq 4$$

PTS: 2 DIF: Grade 8 REF: 1AL1.3

OBJ: Simplify or evaluate linear expressions in one variable with integer, fraction and decimal coefficients. TOP: Algebra I

KEY: algebraic manipulation | rational numbers | solve | inequality

MSC: Dynamic