# Quiz Review
3-1 through 3-5

1. Fifteen is six less than the product of two and a number.
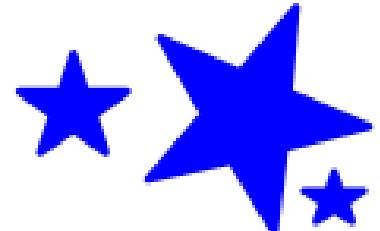
$$15 = 2x - 6$$

2. The quotient of seven and a number equals forty-nine.

$$\frac{7}{x} = 49 \quad \text{or} \quad 7 \div x = 49$$

3. $x - 15 = 23$

   $+15 \quad +15$

   $\boxed{x = 38}$

4. $y + (-3) = 6$

   $+3 \quad +3$
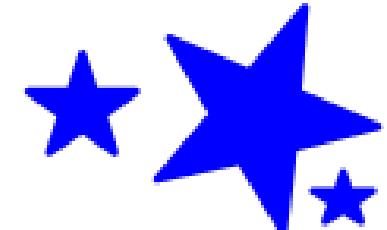
   $\boxed{y = 9}$
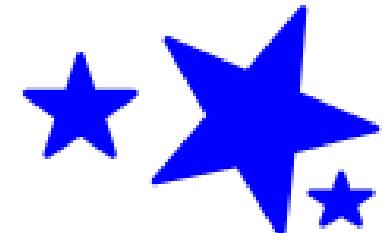
5. $10 + m = 75$

$-10 \qquad -10$

$\boxed{m = 65}$

6. $-3 + z = 14$

$+3 \qquad +3$

$\boxed{z = 17}$

7. $x + \dfrac{3}{5} = \dfrac{7}{8}$

$-\dfrac{3}{5} \quad -\dfrac{3}{5}$
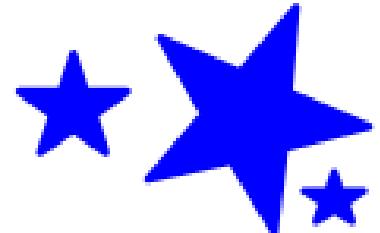
$x = \dfrac{11}{40}$

$\dfrac{7}{8} - \dfrac{3}{5}$

$\dfrac{35}{40} - \dfrac{24}{40}$

$\dfrac{11}{40}$

8. $\dfrac{81}{3} = \dfrac{3p}{3}$

$27 = p$

$\boxed{p = 27}$
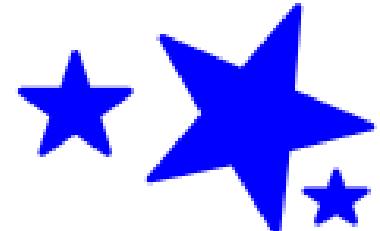
9. $3 \cdot \dfrac{x}{6} = 15 \cdot 6$

$\boxed{x = 90}$

10. $-\dfrac{x}{4} = \dfrac{11}{12}$
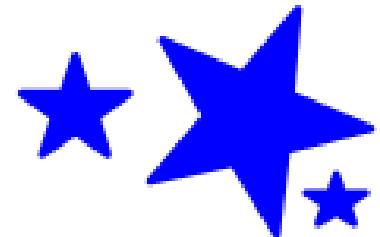
$-4 \cdot \dfrac{x}{-4} = \dfrac{11}{12} \cdot \dfrac{-4}{1}$

$x = -\dfrac{44}{12}$

$x = -\dfrac{11}{3} \text{ or } -3\dfrac{2}{3}$

11. $\frac{3}{2} \cdot \frac{2}{3} y = \frac{75}{1} \cdot \frac{3}{2}$
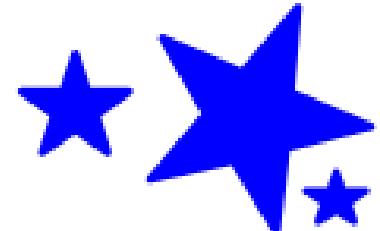
$$Y = \frac{225}{2} \text{ or } 112\frac{1}{2}$$

12. $\frac{-4x}{-4} = \frac{42}{-4}$

$$X = -\frac{21}{2} \text{ or } -10\frac{1}{2}$$

13. $-5x + 7 = 132$

$-7 \quad -7$

$\dfrac{-5x}{-5} = \dfrac{125}{-5}$

$\boxed{x = -25}$
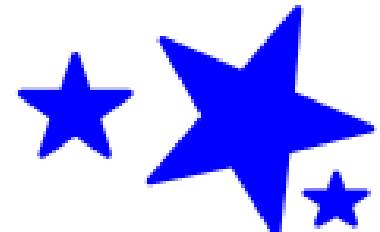
14. $-4 + \dfrac{2}{5}x = 16$

$+4 \qquad\qquad +4$
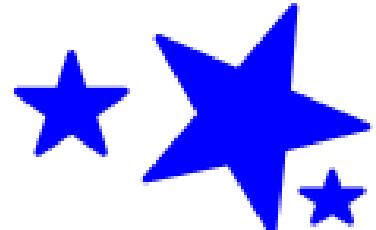
$\dfrac{5}{2} \cdot \dfrac{2}{5}x = \dfrac{20}{1} \cdot \dfrac{5}{2}$

$x = \dfrac{100}{2}$

$x = 50$

15. $\dfrac{14 + x}{3} = 17 \cdot 3$
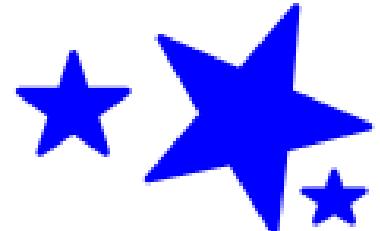
$14 + x = 51$

$-14 \qquad -14$

$\boxed{x = 37}$

16. $5(x + 2) = \underline{12x - 3 - 7x - 12}$
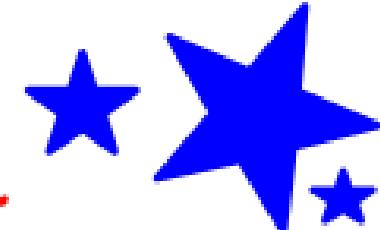
$$5x + 10 = 5x - 15$$
$$-5x \qquad -5x$$

$$10 = -15$$

No Solution

17. $4(x + 3) = 2(2x + 6)$
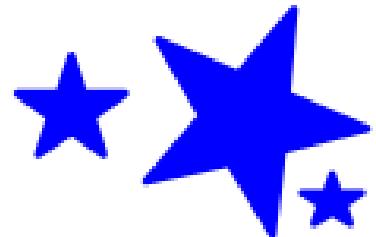
$$4x + 12 = 4x + 12$$
$$-4x \qquad -4x$$
$$12 = 12$$

All Numbers

18. $6(x + 1) = 3(x + 9)$

$6x + 6 = 3x + 27$

$-3x \qquad -3x$

$3x + 6 = 27$

$-6 \qquad -6$

$$\frac{3x}{3} = \frac{21}{3}$$

$x = 7$