KEY

3.2 & 3.3 Worksheet

Solve.

1. $3x + 7 = 19$

$-7 \quad -7$

$\frac{3x}{3} = \frac{12}{3}$

$x = 4$

2. $5h + 4 = 19$

$-4 \quad -4$

$\frac{5h}{5} = \frac{15}{5}$

$h = 3$

3. $7d - 1 = 13$

$+1 \quad +1$

$\frac{7d}{7} = \frac{14}{7}$

$d = 2$

4. $\frac{a}{3} + 4 = 6$

$-4 \quad -4$

$3 \cdot \frac{a}{3} = 2 \cdot 3$

$a = 6$

5. $17 = \frac{w}{5} + 13$

$-13 \quad -13$

$5 \cdot 4 = \frac{w}{5} \cdot 5$

$W = 20$

6. $7 = \frac{5}{6}c - 8$

$+8 \quad +8$

$\frac{6}{5} \cdot 15 = \frac{5}{6} \cdot \frac{6}{5}c$

$C = 18$

7. $8y + 3y = 44$

$\frac{11y}{11} = \frac{44}{11}$

$y = 4$

8. $11x - 9x = 18$

$\frac{2x}{2} = \frac{18}{2}$

$x = 9$

9. $p + 2p - 3 = 6$

$3p - 3 = 6$

$+3 \quad +3$

$\frac{3p}{3} = \frac{9}{3}$

$p = 3$

10. $12v + 14 + 10v = 80$

$22v + 14 = 80$

$-14 \quad -14$

$\frac{22v}{22} = \frac{66}{22}$

$V = 3$

11. $11w - 9 - 7w = 15$

$4w - 9 = 15$

$+9 \quad +9$

$\frac{4w}{4} = \frac{24}{4}$

$w = 6$

12. $5a + 3 - 3a = -7$

$2a + 3 = -7$

$-3 \quad -3$

$\frac{2a}{2} = \frac{-10}{2}$

$a = -5$

13. $3 + 4(z + 5) = 31$

$3 + 4z + 20 = 31$

$4z + 23 = 31$

$-23 \quad -23$

$\frac{4z}{4} = \frac{8}{4}$

$z = 2$

14. $14 + 2(4g - 3) = 40$

$14 + 8g - 6 = 40$

$8g + 8 = 40$

$-8 \quad -8$

$\frac{8g}{8} = \frac{32}{8}$

$g = 4$

15. $5l + 2(l + 1) = 23$

$5l + 2l + 2 = 23$

$7l + 2 = 23$

$-2 \quad -2$

$\frac{7l}{7} = \frac{21}{7}$

$l = 3$

16. $5h + 2(11 - h) = -5$

$5h + 22 - 2h = -5$

$3h + 22 = -5$

$-22 \quad -22$

$\frac{3h}{3} = \frac{-27}{3}$

$h = -9$

17. $27 = 3c - 3(6 - 2c)$

$27 = 3c - 18 + 6c$

$27 = 9c - 18$

$+18 \quad +18$

$\frac{45}{9} = \frac{9c}{9}$

$C = 5$

18. $3 = 6c - 5(2c - 7)$

$3 = 6c - 10c + 35$

$3 = -4c + 35$

$-35 \quad -35$

$\frac{-32}{-4} = \frac{-4c}{-4}$

$C = 8$

Write an equation for the function described. Then find the input.

19. The output of a function is 7 more than 3 times the input. Find the input when the output is -8.

$3x+7=-8$
$-7 \quad -7$
$\frac{3x}{3} = \frac{-15}{3}$ $\boxed{x=-5}$

20. The output of a function is 4 more than 2 times the input. Find the input when the output is -10.

$2x+4=-10$
$-4 \quad -4$
$\frac{2x}{2} = \frac{-14}{2}$ $\boxed{x=-7}$

21. The output of a function is 9 less than 10 times the input. Find the input when the output is 11.

$10x-9=11$
$+9 \quad +9$
$\frac{10x}{10} = \frac{20}{10}$ $\boxed{x=2}$

22. Tyler paid $124 to get his car repaired. The total cost for the repairs was the sum of the amount paid for parts and the amount paid for labor. Tyler was charged $76 for parts and $32 per hour for labor. Find the amount of time it took to repair his car.

$32x+76=124$
$-76 \quad -76$
$\frac{32x}{32} = \frac{48}{32}$
$x=1.5$

$\boxed{1.5 \text{ hours}}$