

* Answer Key

7.6 Practice - Proportions

Solve each proportion.

1) $\frac{10}{a} = \frac{6}{8}$

2) $\frac{7}{9} = \frac{n}{6}$

3) $\frac{7}{6} = \frac{2}{k}$

4) $\frac{8}{x} = \frac{4}{8}$

5) $\frac{6}{x} = \frac{8}{2}$

6) $\frac{n-10}{8} = \frac{9}{3}$

7) $\frac{m-1}{5} = \frac{8}{2}$

8) $\frac{8}{5} = \frac{3}{x-8}$

9) $\frac{2}{9} = \frac{10}{p-4}$

10) $\frac{9}{n+2} = \frac{3}{9}$

11) $\frac{b-10}{7} = \frac{b}{4}$

12) $\frac{9}{4} = \frac{r}{r-4}$

13) $\frac{x}{5} = \frac{x+2}{9}$

14) $\frac{n}{8} = \frac{n-4}{3}$

15) $\frac{3}{10} = \frac{a}{a+2}$

16) $\frac{x+1}{9} = \frac{x+2}{2}$

17) $\frac{v-5}{v+6} = \frac{4}{9}$

18) $\frac{n+8}{10} = \frac{n-9}{4}$

19) $\frac{7}{x-1} = \frac{4}{x-6}$

20) $\frac{k+5}{k-6} = \frac{8}{5}$

21) $\frac{x+5}{5} = \frac{6}{x-2}$

22) $\frac{4}{x-3} = \frac{x+5}{5}$

23) $\frac{m+3}{4} = \frac{11}{m-4}$

24) $\frac{x-5}{8} = \frac{4}{x-1}$

25) $\frac{2}{p+4} = \frac{p+5}{3}$

26) $\frac{5}{n+1} = \frac{n-4}{10}$

27) $\frac{n+4}{3} = \frac{-3}{n-2}$

28) $\frac{1}{n+3} = \frac{n+2}{2}$

29) $\frac{3}{x+4} = \frac{x+2}{5}$

30) $\frac{x-5}{4} = \frac{-3}{x+3}$

Answer each question. Round your answer to the nearest tenth. Round dollar amounts to the nearest cent.

31) The currency in Western Samoa is the Tala. The exchange rate is approximately \$0.70 to 1 Tala. At this rate, how many dollars would you get if you exchanged 13.3 Tala?

32) If you can buy one plantain for \$0.49 then how many can you buy with

Proportions HW - ODDS

CUE COLUMN

NOTES

$$1. \frac{10}{a} = \frac{6}{8}$$

$$80 = 6a$$

$$a = 13.\bar{3}$$

$$11. \frac{b-10}{7} = \frac{b}{4}$$

$$7b = 4b - 40$$

$$3b = -40$$

$$b = -13.\bar{3}$$

$$3. \frac{7}{b} = \frac{2}{k}$$

$$7k = 12$$

$$k = 1.\bar{7}$$

$$13. \frac{x}{5} = \frac{x+2}{9}$$

$$9x = 5x + 10$$

$$4x = 10$$

$$x = 2.5$$

$$5. \frac{6}{x} = \frac{8}{2}$$

$$12 = 8x$$

$$x = 1.5$$

$$15. \frac{3}{10} = \frac{a}{a+2}$$

$$10a = 3a + 6$$

$$7a = 6$$

$$a = \frac{6}{7}$$

$$7. \frac{m-1}{5} = \frac{8}{2}$$

$$2(m-1) = 40$$

$$2m - 2 = 40$$

$$2m = 42$$

$$m = 21$$

$$17. \frac{v-5}{v+6} = \frac{4}{9}$$

$$4v + 24 = 9v - 45$$

$$145 = 4v$$

$$69 = v$$

$$v = 13.8$$

$$9. \frac{2}{9} = \frac{10}{p-4}$$

$$2(p-4) = 90$$

$$2p - 8 = 90$$

$$2p = 98$$

$$p = 49$$

$$19. \frac{7}{x-1} = \frac{4}{x-6}$$

$$7x - 42 = 4x - 4$$

$$3x = 38$$

$$x = 12.7$$

SUMMARY

CUE COLUMN

NOTES

$$21. \frac{x+5}{5} = \frac{6}{x-2}$$

$$\begin{aligned}(x+5)(x-2) &= 30 \\ x^2 - 2x + 5x - 10 &= 30 \\ x^2 + 3x - 40 &= 0 \\ (x+8)(x-5) &= 0 \\ x &= -8, 5\end{aligned}$$

$$27. \frac{n+4}{3} = \frac{-3}{n-2}$$

$$\begin{aligned}(n+4)(n-2) &= -9 \\ n^2 + 2n - 8 &= -9 \\ n^2 + 2n + 1 &= 0 \\ (n+1)(n+1) &= 0 \\ n &= -1\end{aligned}$$

$$23. \frac{m+3}{4} = \frac{11}{m-4}$$

$$\begin{aligned}(m+3)(m-4) &= 44 \\ m^2 - m - 12 &= 44 \\ m^2 - m - 56 &= 0 \\ (m-8)(m+7) &= 0 \\ m &= 8, -7\end{aligned}$$

$$29. \frac{3}{x+4} = \frac{x+2}{5}$$

$$\begin{aligned}(x+4)(x+2) &= 15 \\ x^2 + 6x + 8 &= 15 \\ x^2 + 6x - 7 &= 0 \\ (x+7)(x-1) &= 0 \\ x &= -7, 1\end{aligned}$$

$$25. \frac{2}{p+4} = \frac{p+5}{3}$$

$$\begin{aligned}(p+4)(p+5) &= 6 \\ p^2 + 9p + 20 &= 6 \\ p^2 + 9p + 14 &= 0\end{aligned}$$

$$\begin{aligned}(p+2)(p+7) &= 0 \\ p &= -2, -7\end{aligned}$$

$$31. \frac{\$0.70}{t+1} = \frac{x}{13.3}$$

$$\begin{aligned}(13.3)(0.70) &= x \\ \$9.31 &= x\end{aligned}$$

SUMMARY