Algebra 1   Name_____

Solving Equations by Cross Multiplication

Date_____ Period____

Solve each proportion.

1) $\dfrac{n}{5} = \dfrac{6}{7}$

2) $\dfrac{4}{8} = \dfrac{v}{6}$

3) $\dfrac{9}{7} = \dfrac{k}{2}$

4) $\dfrac{2}{10} = \dfrac{10}{x}$

5) $\dfrac{7}{5} = \dfrac{6}{n}$

6) $\dfrac{4}{9} = \dfrac{9}{m}$

7) $\dfrac{b}{9} = \dfrac{10}{3}$

8) $\dfrac{3}{6} = \dfrac{5}{r}$

9) $\dfrac{5}{4} = \dfrac{p}{5}$

10) $\dfrac{x}{10} = \dfrac{9}{6}$

-1-

11) $\dfrac{n+7}{7} = \dfrac{4}{9}$

12) $\dfrac{6}{9} = \dfrac{2}{x-5}$

13) $\dfrac{8}{10} = \dfrac{a+1}{3}$

14) $\dfrac{4}{3} = \dfrac{p+6}{8}$

15) $\dfrac{8}{m-4} = \dfrac{6}{2}$

16) $\dfrac{3}{7} = \dfrac{5}{n-8}$

17) $\dfrac{8}{3} = \dfrac{7}{k-2}$

18) $\dfrac{7}{10} = \dfrac{x+3}{4}$

19) $\dfrac{3}{10} = \dfrac{x+2}{8}$

20) $\dfrac{7}{8} = \dfrac{3}{x-6}$

21) $\dfrac{n+5}{4} = \dfrac{n}{6}$

22) $\dfrac{n+4}{4n} = \dfrac{6}{4}$

23) $\dfrac{10}{x} = \dfrac{6}{x-9}$

24) $\dfrac{6}{v} = \dfrac{8}{v+4}$

25) $\dfrac{a}{a-10} = \dfrac{6}{9}$

26) $\dfrac{10}{a} = \dfrac{8}{a+10}$

27) $\dfrac{r}{r+5} = \dfrac{7}{5}$

28) $\dfrac{x}{5} = \dfrac{x+4}{7}$

29) $\dfrac{x+10}{x} = \dfrac{5}{10}$

30) $\dfrac{b}{2} = \dfrac{b-1}{9}$

31) $\dfrac{b-8}{8} = \dfrac{b-9}{2}$

32) $\dfrac{8}{3} = \dfrac{r+9}{r+8}$

33) $\dfrac{3}{7} = \dfrac{x-2}{x-7}$

34) $\dfrac{n-4}{9} = \dfrac{n+8}{2}$

35) $\dfrac{x+2}{x+7} = \dfrac{7}{4}$

36) $\dfrac{p+9}{10} = \dfrac{p-10}{9}$

37) $\dfrac{v+6}{3} = \dfrac{v+9}{8}$

38) $\dfrac{6}{k+3} = \dfrac{5}{k-7}$

39) $\dfrac{m-8}{5} = \dfrac{m-6}{6}$

40) $\dfrac{n+7}{2} = \dfrac{n-6}{9}$

Answers to Solving Equations by Cross Multiplication

1) $\left\{\dfrac{30}{7}\right\}$

3) $\left\{\dfrac{18}{7}\right\}$

5) $\left\{\dfrac{30}{7}\right\}$

7) $\{30\}$

9) $\left\{\dfrac{25}{4}\right\}$

11) $\left\{-\dfrac{35}{9}\right\}$

13) $\left\{\dfrac{7}{5}\right\}$

15) $\left\{\dfrac{20}{3}\right\}$

17) $\left\{\dfrac{37}{8}\right\}$

19) $\left\{\dfrac{2}{5}\right\}$

21) $\{-15\}$

23) $\left\{\dfrac{45}{2}\right\}$

25) $\{-20\}$

27) $\left\{-\dfrac{35}{2}\right\}$

29) $\{-20\}$

31) $\left\{\dfrac{28}{3}\right\}$

33) $\left\{-\dfrac{7}{4}\right\}$

35) $\left\{-\dfrac{41}{3}\right\}$

37) $\left\{-\dfrac{21}{5}\right\}$

39) $\{18\}$