

Math 8

Section 4.4 Cross Multiplying

Name _____

Date _____

Cross Multiply and solve for the missing variable. Show all your work and steps.

Solve.

1. $\frac{a}{18} = \frac{1}{2}$

2. $\frac{3}{8} = \frac{y}{88}$

3. $\frac{32}{40} = \frac{w}{25}$

4. $\frac{c}{8} = \frac{21}{24}$

5. $\frac{15}{10} = \frac{3}{k}$

6. $\frac{12}{18} = \frac{4}{r}$

7. $\frac{12}{r} = \frac{45}{120}$

8. $\frac{105}{140} = \frac{15}{a}$

9. $\frac{28}{4} = \frac{y}{36}$

10. $\frac{h}{121} = \frac{33}{11}$

11. $\frac{42}{c} = \frac{25}{75}$

12. $\frac{4}{36} = \frac{52}{d}$

13. $\frac{w}{6} = \frac{2}{15}$

14. $\frac{8}{40} = \frac{p}{2}$

15. $\frac{9}{4} = \frac{6}{x}$

16. $\frac{5}{n} = \frac{3}{8}$

17. $\frac{15}{28} = \frac{p}{7}$

18. $\frac{a}{26} = \frac{5}{12}$

19. $\frac{y}{30} = \frac{0.2}{3}$

20. $\frac{56}{n} = \frac{7}{0.5}$

21. $\frac{5}{n} = \frac{3}{8}$

22. $\frac{2}{24} = \frac{3}{4y}$

23. $\frac{8}{7} = \frac{16}{2c}$

24. $\frac{3}{8} = \frac{3a}{16}$

25. A woman drives 200 km in 5 hours. At the same rate, how far would she travel in 8 hours?

26. A car used 7 gallons of gasoline to go a distance of 210 miles. At that rate, how much gasoline would the car use to go 495 miles?

27. A drink is made up of 10 parts sparkling water to 3 parts lemon juice. How much juice should be mixed with 80 mL of water?

28. A cake recipe calls for a 3 : 1 mixture of flour to sugar. If 8 cups of flour are used, how much sugar should be added?
29. A hospital must be staffed with 5 nurses per 17 patients. How many nurses are required for 255 patients?
30. In a county election, the incumbent received 5 votes for every 3 received by the challenger. If the incumbent received 6210 votes, how many did the challenger get?

Write each ratio in simplest form.

31. 30 to 42
32. 10 to 75
33. 7 to 84
34. 11 to 99
35. 132 to 48
36. 90 to 162
37. 50 to 5000
38. 150,000 to 75
39. $\frac{1}{2}$ to 5
40. 100 m to 60 km
41. 48 g to 1.8 kg
42. 750 cm to 5 m
43. 18 m to 36 cm
44. 0.3 km to 1500 cm
45. 0.7 km to 70000 cm

Answer List

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|------------------------|--------------------|--------------------|
| 1. 9 | 2. 33 | 3. 20 |
| 4. 7 | 5. 2 | 6. 6 |
| 7. 32 | 8. 20 | 9. 252 |
| 10. 363 | 11. 126 | 12. 468 |
| 13. $\frac{4}{5}$ | 14. $\frac{2}{5}$ | 15. $\frac{8}{3}$ |
| 16. $\frac{40}{3}$ | 17. $\frac{15}{4}$ | 18. $\frac{65}{6}$ |
| 19. 2 | 20. 4 | 21. $\frac{40}{3}$ |
| 22. 9 | 23. 7 | 24. 2 |
| 25. 320 km | 26. 16.5 gal | 27. 24 mL |
| 28. $2\frac{2}{3}$ cup | 29. 75 | 30. 3726 |
| 31. 5 : 7 | 32. 2 : 15 | 33. 1 : 12 |
| 34. 1 : 9 | 35. 11 : 4 | 36. 5 : 9 |
| 37. 1 : 100 | 38. 2000 : 1 | 39. 1 : 10 |
| 40. 1 : 600 | 41. 2 : 75 | 42. 3 : 2 |
| 43. 50 : 1 | 44. 20 : 1 | 45. 1 : 1 |

Catalog List

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|---------------|---------------|---------------|
| 1. ALG KA 1 | 2. ALG KA 3 | 3. ALG KA 5 |
| 4. ALG KA 7 | 5. ALG KA 9 | 6. ALG KA 11 |
| 7. ALG KA 13 | 8. ALG KA 15 | 9. ALG KA 17 |
| 10. ALG KA 19 | 11. ALG KA 21 | 12. ALG KA 23 |
| 13. ALG KA 25 | 14. ALG KA 27 | 15. ALG KA 29 |
| 16. ALG KA 31 | 17. ALG KA 33 | 18. ALG KA 35 |
| 19. ALG KA 37 | 20. ALG KA 39 | 21. ALG KA 31 |
| 22. ALG KA 71 | 23. ALG KA 73 | 24. ALG KA 75 |
| 25. ALG KE 1 | 26. ALG KE 3 | 27. ALG KE 5 |
| 28. ALG KE 7 | 29. ALG KE 9 | 30. ALG KE 11 |
| 31. ALG KB 1 | 32. ALG KB 3 | 33. ALG KB 5 |
| 34. ALG KB 7 | 35. ALG KB 9 | 36. ALG KB 11 |
| 37. ALG KB 13 | 38. ALG KB 15 | 39. ALG KB 17 |
| 40. ALG KB 53 | 41. ALG KB 55 | 42. ALG KB 57 |
| 43. ALG KB 59 | 44. ALG KB 61 | 45. ALG KB 63 |