

Exercise 17A - 8

5

Multiplying Mixed number and Mixed number

Tsai's Math

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| 1. $\frac{2}{3} \times \frac{3}{4} \times \frac{1}{7} =$ | 2. $\frac{1}{2} \times \frac{3}{4} \times \frac{1}{3} =$ | 3. $\frac{1}{2} \times \frac{3}{5} \times \frac{2}{3} =$ |
| 4. $\frac{2}{5} \times \frac{3}{7} \times \frac{7}{12} =$ | 5. $\frac{3}{4} \times \frac{5}{6} \times \frac{2}{5} =$ | 6. $\frac{4}{9} \times \frac{7}{8} \times \frac{3}{7} =$ |
| 7. $\frac{7}{6} \times \frac{3}{5} \times \frac{2}{7} =$ | 8. $\frac{4}{5} \times \frac{1}{3} \times \frac{5}{9} =$ | 9. $\frac{2}{5} \times \frac{5}{7} \times \frac{7}{8} =$ |

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| ✓ 10. $1\frac{2}{3} \times 2\frac{1}{3} \times \frac{1}{5} =$ | 11. $3\frac{3}{4} \times 2\frac{1}{3} \times \frac{3}{5} =$ |
| 12. $\frac{4}{5} \times \frac{3}{8} \times 2\frac{2}{5} =$ | 13. $\frac{2}{3} \times 15 \times \frac{3}{5} =$ |
| 14. $3\frac{3}{4} \times \frac{4}{5} \times 1\frac{3}{4} =$ | 15. $1\frac{4}{5} \times 20 \times 2\frac{1}{4} =$ |
| ✓ 16. $1\frac{1}{4} \times 2\frac{1}{3} \times 1\frac{1}{5} =$ | 17. $4\frac{1}{3} \times 3\frac{3}{8} \times 4 =$ |
| 18. $5\frac{5}{6} \times 1\frac{3}{5} \times \frac{2}{3} =$ | 19. $4\frac{2}{7} \times 2\frac{1}{10} \times \frac{5}{6} =$ |

20. The gas tank in Pedro's car holds 18 gal of gas. Pedro filled the tank by adding $9\frac{3}{4}$ gal. How much gas was in the tank before he filled it?
21. Luisa's tank holds $1\frac{1}{2}$ times as much gas as Pedro's 18 gal tank. How much gas does Luisa's tank hold?
22. Pedro figured that he could travel $20\frac{1}{2}$ mi on a gallon of gas. How far could he travel on 3 gal?
- ✓ 23. Of all the books sold, $\frac{3}{10}$ was nonfiction. One third of the nonfiction books sold were textbooks. What part of the books sold were textbooks?
- ✓ 24. Five sixths of the 12 best sellers in the store were sold. One fifth of the best sellers sold were nonfiction. How many of the best sellers sold were fiction?

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|-----|-----|-----|-----|
| 1. | 2. | 3. | 4. |
| 5. | 6. | 7. | 8. |
| 9. | 10. | 11. | 12. |
| 13. | 14. | 15. | 16. |
| 17. | 18. | 19. | 20. |
| 21. | 22. | 23. | 24. |

Exercise 17C - 1

5

What is the reciprocal of the number

Tsai's Math

| | | | | | | | | |
|------------------|-------------------|-------------------|------------------|-------------------|-------------------|-------------------|-------------------|--------------------|
| 1. $\frac{2}{3}$ | 2. $\frac{1}{2}$ | 3. 4 | 4. $\frac{3}{5}$ | 5. $\frac{4}{7}$ | 6. $\frac{1}{6}$ | 7. 9 | 8. $\frac{5}{6}$ | 9. $\frac{2}{7}$ |
| 10. 3 | 11. $\frac{4}{9}$ | 12. $\frac{5}{9}$ | 13. 8 | 14. $\frac{3}{4}$ | 15. $\frac{4}{5}$ | 16. $\frac{1}{7}$ | 17. $\frac{3}{8}$ | 18. $\frac{7}{10}$ |

Divide

| | | |
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| ✓ 19. $\frac{2}{3} \div \frac{5}{6} =$ | ✓ 20. $\frac{3}{10} \div \frac{3}{5} =$ | ✓ 21. $\frac{4}{5} \div \frac{4}{7} =$ |
| ✓ 22. $\frac{5}{6} \div \frac{1}{2} =$ | ✓ 23. $\frac{8}{9} \div \frac{2}{3} =$ | 24. $\frac{5}{6} \div \frac{4}{9} =$ |
| 25. $\frac{2}{3} \div \frac{4}{9} =$ | 26. $\frac{3}{8} \div \frac{2}{5} =$ | 27. $\frac{3}{10} \div \frac{1}{9} =$ |
| 28. $\frac{3}{4} \div \frac{3}{8} =$ | 29. $\frac{5}{9} \div \frac{5}{7} =$ | 30. $\frac{2}{3} \div \frac{2}{5} =$ |
| 31. $\frac{4}{9} \div \frac{2}{3} =$ | 32. $\frac{4}{5} \div \frac{2}{5} =$ | 33. $\frac{2}{5} \div \frac{3}{4} =$ |
| 34. $\frac{9}{10} \div \frac{3}{4} =$ | 35. $\frac{4}{5} \div \frac{3}{4} =$ | 36. $\frac{7}{12} \div \frac{7}{8} =$ |
| 37. $\frac{2}{3} \div \frac{3}{10} =$ | 38. $\frac{5}{9} \div \frac{5}{7} =$ | 39. $\frac{2}{5} \div \frac{8}{15} =$ |
| 40. $\frac{5}{8} \div \frac{5}{6} =$ | 41. $\frac{3}{8} \div \frac{5}{12} =$ | 42. $\frac{7}{8} \div \frac{7}{12} =$ |
| 43. $\frac{9}{10} \div \frac{3}{8} =$ | 44. $\frac{4}{9} \div \frac{5}{8} =$ | 45. $\frac{3}{4} \div \frac{2}{3} =$ |

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|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 |
| 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 |

Exercise 17C - 2

5

What is the reciprocal of the number

Tsai's Math

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|------|------------------|------|------------------|------|------------------|------|------------------|------|
| 1. 3 | 2. $\frac{1}{3}$ | 3. 4 | 4. $\frac{1}{4}$ | 7. 5 | 6. $\frac{1}{5}$ | 7. 6 | 8. $\frac{1}{6}$ | 9. 8 |
|------|------------------|------|------------------|------|------------------|------|------------------|------|

Divide

| | | |
|------------------------------|------------------------------|-------------------------------|
| ✓ 10. $\frac{1}{6} \div 3 =$ | ✓ 11. $\frac{2}{5} \div 4 =$ | ✓ 12. $\frac{3}{4} \div 12 =$ |
| ✓ 13. $3 \div \frac{1}{6} =$ | ✓ 14. $4 \div \frac{2}{5} =$ | ✓ 15. $12 \div \frac{4}{9} =$ |
| 16. $\frac{2}{9} \div 16 =$ | 17. $\frac{2}{3} \div 6 =$ | 18. $\frac{4}{5} \div 30 =$ |
| 19. $48 \div \frac{3}{4} =$ | 20. $24 \div \frac{4}{5} =$ | 21. $10 \div \frac{5}{9} =$ |
| 22. $\frac{2}{5} \div 7 =$ | 23. $\frac{9}{10} \div 15 =$ | 24. $\frac{4}{5} \div 8 =$ |
| 25. $12 \div \frac{1}{4} =$ | 26. $15 \div \frac{1}{2} =$ | 27. $72 \div \frac{8}{9} =$ |
| 28. $8 \div \frac{2}{3} =$ | 29. $4 \div \frac{7}{10} =$ | 30. $18 \div \frac{3}{4} =$ |
| 31. $\frac{4}{9} \div 16 =$ | 32. $\frac{1}{5} \div 15 =$ | 33. $\frac{3}{4} \div 18 =$ |
| 34. $25 \div \frac{5}{6} =$ | 35. $2 \div \frac{4}{9} =$ | 36. $\frac{2}{5} \div 4 =$ |
| 37. $\frac{2}{5} \div 16 =$ | 38. $9 \div \frac{3}{5} =$ | 39. $\frac{1}{4} \div 6 =$ |

| | | | | | | | | |
|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 |
| 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 |

Exercise 14F - 7

5

- Janelle rakes leaves for $2\frac{5}{6}$ hours. It took her $1\frac{2}{6}$ hours to rake the front lawn. How long did it take her to rake the back lawn?
- It takes Michael $1\frac{1}{2}$ hour to shovel snow from the walkway. It takes him $\frac{5}{6}$ hour to shovel the driveway. How long does he shovel in all?
- Jason has raked two lawns. The first lawn took $\frac{2}{3}$ hour. The second lawn took $\frac{1}{2}$ hour. How much longer did it take to rake the first lawn?
- Holly delivers $\frac{1}{3}$ of her newspapers on Pine Street and $\frac{1}{6}$ of them on Elm Street. What part of all the papers does she deliver on these two streets?
- Barbara rakes the leaves in her front yard. It takes $\frac{2}{3}$ hour. It takes the same amount of time to do the back yard. How long does she spend raking the front and back yards?
- Marc shovels Mr. Jacob's drive way in $\frac{3}{4}$ hour. He shovels Mrs. Yin's driveway in 1 hour. How long does he shovel all together?
- An architect spends $15\frac{1}{3}$ hours planning the Central Bank project. She spends $8\frac{1}{2}$ hours planning the Beekman Insurance Building and $6\frac{3}{4}$ hours planning the Middle Bank. How much longer does she spend planning the banks than the insurance building?
- Sidney is $11\frac{1}{2}$ years old. His sister, Cleo, is $2\frac{1}{3}$ years older. His oldest sister, Rene, is $2\frac{1}{4}$ years older than Cleo. How old is Rene?
- Francisco went outside for an hour. He walked for $\frac{2}{6}$ of the hour and ran for $\frac{2}{8}$ of it. The rest of the time he sat. How much time did he spend sitting?
- Running in the relay race are $\frac{1}{8}$ of the people in the class. The three-legged race has $\frac{5}{6}$ of the class running. The rest of the class does not race. What part of the class does not run in these races?
- Anna read her book for $\frac{1}{2}$ hour on Monday, $\frac{2}{3}$ hour on Tuesday, and $\frac{3}{4}$ hour on Wednesday. How many hours did she read in all?
- Tommy has been shoveling snow for $\frac{1}{2}$ hour. He has to be home in $\frac{3}{4}$ hour. It takes him $\frac{1}{3}$ hour to walk home. For how much longer can he shovel? How long will he have shoveled in all?
- During their stay at the lake, Donna catches $3\frac{1}{2}$ dozen fish and Albert catches $2\frac{2}{3}$ dozen fish. How many dozen fish do they catch in all?
- Mr. Morrow has 17 acres of land. He plants $4\frac{3}{10}$ acres with wheat and $11\frac{3}{10}$ acres with corn. How many acres are left unplanted?

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14

Exercise 14B – 11

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Find the missing factors.

1. $_? _ \times 4 = 20$ 2. $_? _ \times 3 = 21$ 3. $_? _ \times 3 = 33$

4. $_? _ \times 12 = 36$ 5. $_? _ \times 5 = 30$ 6. $_? _ \times 5 = 25$

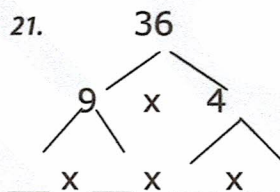
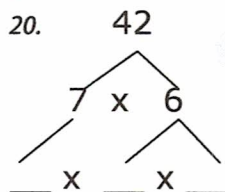
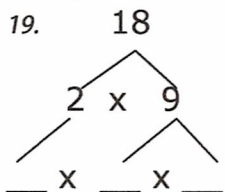
| | | |
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| 1. | 2. | 3. |
| 4. | 5. | 6. |

Write **PRIME (P)** or **COMPOSITE (C)**. Write C or P

7. 18 8. 15 9. 34 10. 7
 11. 24 12. 39 13. 17 14. 22
 15. 74 16. 46 17. 80 18. 53

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| 7. | 8. | 9. | 10. |
| 11. | 12. | 13. | 14. |
| 15. | 16. | 17. | 18. |

Complete the factor trees.



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| 19. |
| 20. |
| 21. |

Write the prime factorization of each number. Use a factor tree.

Write the factors in order from least to greatest.

22. 20 23. 63
 24. 44 25. 95
 26. 56 27. 38
 28. 12 29. 40

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| 22. | 23. |
| 24. | 25. |
| 26. | 27. |
| 28. | 29. |

30. What is the smallest number divisible by the first three prime numbers and the first three composite numbers?
31. An odd number is less than 160 and has exactly three different prime factors. What is the number?

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For each of the following, use the set of clues to determine the secret number.

32. Clue 1 The number is a multiple of 5, but it does not end in 5.
 Clue 2 The prime factorization of the number is a string of three numbers.
 Clue 3 Two of the numbers in the prime factorization are the same.
 Clue 4 The number is bigger than the seventh square number.
33. Clue 1 The number has three digits.
 Clue 2 The number is less than 140.
 Clue 3 The number has 7 as a factor.
 Clue 4 The number is even.
 Clue 5 The sum of the digits of the number is less than 9.

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Exercise CT 5F - 2

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1. a) One week Mr. Blake worked 8 hours a day for 5 days. He earned \$240 for the week. What was his hourly pay?
 - b) Mrs. Blake works 20 hours each week as a window dresser. She earns \$5 an hour. After taxes are deducted she brings home \$86 a week. How much money is deducted for taxes?
 - c) Mrs. Blake pays \$1.5 a day to ride a bus to and from work. She spends \$2.50 a day for lunch. How much money does she spend for lunch and bus fare in a 5-day work week?
 - d) One week Mrs. Blake worked a total of 28 hours during a 4-day period. Each day she worked the same number of hours. She earned \$5 an hour. What was her pay for a day?
2. Yolanda shot 720 pictures this year.
- a) How many rolls of film did she need if she used 36-shot film only?
 - b) How many rolls did she need if she used 24-shot film only?
 - c) How many rolls in total did she need if she uses the same number of films from both 24-shot and 36-shot film?

3. Timmy, Jamie, George, and Ricardo went fishing. Each boy caught 1 fish. George's fish is 3 inches longer than Timmy's. Timmy's fish was twice as long as Jamie's. Jamie's fish was 9 inches shorter than Ricardo's. Ricardo's fish was 18 inches long. How long was George's fish?
4. Mindy, Ned, Opal, and Paul were skipping rocks in a lake. Paul's rock skipped 8 more times than Mindy's. Mindy's skipped 3 more times than Ned's. Ned's rock skipped as many times as Opal's. Opal's rock skipped 8 times. How many times did Paul's rock skip?
5. Max, Josie, and Donna are picking apples. Josie picks twice as many apples as Max. Max picks $\frac{1}{3}$ as many as Donna. Donna picks 15 apples. How many apples does Josie pick?
6. Melody has \$21 for her weekly allowance. Nelson has $\frac{1}{3}$ of hers. Orion has 3 more dollars than Nelson. How much allowance does Orion have?
7. Nancy is 3 years older than Maria. Nine years later, Maria will turn 15. How old is Nancy 3 years ago?
8. Joe has photos of his pets, his baseball team, and his family. He has 5 photos of the team and twice as many photos of his pets. Half of all his pictures are of his family. How many photos does he have in all?

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| 1a |
| 1b |
| 1c |
| 1d |
| 2a |
| 2b |
| 2c |
| 3. |
| 4. |
| 5. |
| 6. |
| 7. |
| 8. |
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