Adding and subtracting fractions

$$\frac{3}{4} + \frac{2}{3} = \square$$

$$= \frac{9}{12} + \frac{8}{12}$$

$$= \frac{17}{12}$$

$$= 1\frac{5}{12}$$

Write both as $\frac{1}{12}$s.

1. $\frac{2}{5} + 4 = \square$
2. $\frac{2}{3} + \frac{5}{6} = \square$
3. $\frac{2}{5} + \frac{2}{3} = \square$
4. $\frac{3}{4} + \frac{1}{5} = \square$
5. $\frac{2}{3} + \frac{2}{4} = \square$
6. $\frac{7}{8} - \frac{2}{3} = \square$
7. $\frac{2}{5} - \frac{1}{6} = \square$
8. $1\frac{2}{9} - \frac{2}{3} = \square$
9. $1\frac{4}{5} - \frac{3}{4} = \square$
10. $\frac{8}{9} - \frac{1}{5} = \square$

Write both fractions out with the same denominator.

THINK

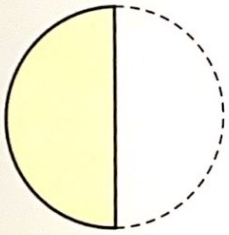
How can you use what you have just practised to work out $\frac{2}{5} + 0{\cdot}8$? What is the answer?

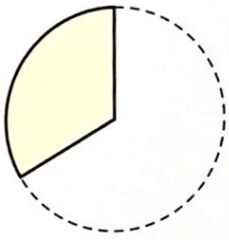
Multiplying and dividing with fractions

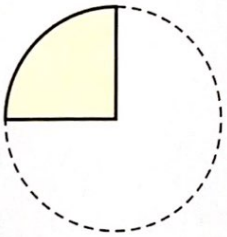
Solve these multiplications.

1. $5 \times \frac{1}{4} = \square$
2. $7 \times \frac{1}{6} = \square$
3. $11 \times \frac{1}{3} = \square$
4. $8 \times \frac{1}{4} = \square$
5. $8 \times \frac{1}{5} = \square$
6. $10 \times \frac{1}{7} = \square$
7. $15 \times \frac{1}{4} = \square$
8. $50 \times \frac{1}{9} = \square$

Answer these divisions.







9. $\frac{1}{2} \div 2 = \square$
10. $\frac{1}{2} \div 3 = \square$
11. $\frac{1}{2} \div 4 = \square$
12. $\frac{1}{3} \div 2 = \square$
13. $\frac{1}{3} \div 3 = \square$
14. $\frac{1}{3} \div 4 = \square$
15. $\frac{1}{4} \div 2 = \square$
16. $\frac{1}{4} \div 3 = \square$
17. $\frac{1}{4} \div 4 = \square$

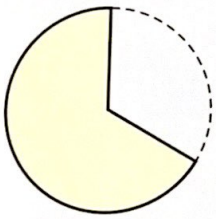
THINK

Write a multiplication where the answer is smaller than both of the numbers being multiplied. Write one where the answer is bigger than both numbers being multiplied.

Answer these multiplications and divisions.

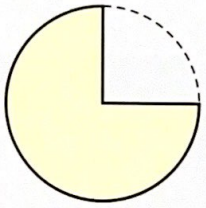
1. $12 \times \frac{1}{6} = \square$
2. $\frac{1}{6} \div 2 = \square$
3. $11 \times \frac{1}{2} = \square$
4. $\frac{1}{6} \div 3 = \square$
5. $22 \times \frac{1}{4} = \square$
6. $24 \times \frac{1}{5} = \square$
7. $\frac{1}{8} \div 3 = \square$
8. $15 \times \frac{1}{8} = \square$
9. $\frac{1}{3} \div 4 = \square$
10. $\frac{1}{3} \div 3 = \square$

Now solve these questions.

11. 

$\frac{1}{2}$ of $\frac{2}{3}$

$\frac{1}{4}$ of $\frac{2}{3}$

12. 

$\frac{1}{2} \times \frac{3}{4}$

$\frac{1}{3} \times \frac{3}{4}$

Multiply these fractions together.

13. $\frac{1}{3} \times \frac{2}{3} = \square$
14. $\frac{1}{4} \times \frac{1}{3} = \square$
15. $\frac{1}{3} \times \frac{4}{9} = \square$
16. $\frac{1}{4} \times \frac{3}{4} = \square$
17. $\frac{1}{5} \times \frac{3}{4} = \square$
18. $\frac{1}{3} \times \frac{4}{5} = \square$
19. $\frac{1}{2} \times \frac{3}{8} = \square$
20. $\frac{1}{3} \times \frac{7}{8} = \square$
21. $\frac{1}{7} \times \frac{2}{3} = \square$

What number can multiply a number of thirds, quarters and sixths to give a whole number answer? Test out your suggestion.

Answer these multiplications and divisions.

1. $14 \times \frac{1}{6} = \square$
2. $\frac{1}{5} \div 7 = \square$
3. $11 \times \frac{1}{7} = \square$
4. $\frac{1}{6} \div 6 = \square$
5. $30 \times \frac{1}{4} = \square$

6. $67 \times \frac{1}{9} = \square$
7. $\frac{1}{8} \div 7 = \square$
8. $42 \times \frac{1}{8} = \square$
9. $\frac{1}{9} \div 5 = \square$
10. $\frac{1}{7} \div 3 = \square$

Multiply these pairs of fractions.

11. $\frac{1}{4} \times \frac{3}{5} = \square$
12. $\frac{4}{5} \times \frac{2}{3} = \square$
13. $\frac{2}{7} \times \frac{2}{3} = \square$
14. $\frac{2}{3} \times \frac{5}{6} = \square$
15. $\frac{3}{5} \times \frac{4}{5} = \square$
16. $\frac{2}{9} \times \frac{3}{4} = \square$
17. $\frac{3}{5} \times \frac{6}{7} = \square$
18. $\frac{2}{3} \times \frac{7}{8} = \square$
19. $\frac{5}{7} \times \frac{2}{3} = \square$

What is $\frac{1}{2}$ squared? What is $\frac{1}{3}$ squared? What is $\frac{1}{4}$ squared? What is $\frac{1}{5}$ squared? Is the square of a fraction that is less than 1 larger or smaller than the fraction itself?

I am confident with multiplying and dividing fractions.