Exercise 5 (answers on page 40)

Solve the following fraction word problems. Cancel and simplify your answers.

1. A stack of boards is 21 inches high. Each board is $1\frac{3}{4}$ inches thick. How many boards are there?

2. A satellite makes 4 revolutions of the earth in one day. How many revolutions would it make in $6\frac{1}{2}$ days?

3. A bolt has $16\frac{1}{2}$ turns per inch. How many turns would be in $2\frac{1}{2}$ inches of threads?

4. If a bookshelf is $28\frac{1}{8}$ inches long, how many $1\frac{7}{8}$ inch thick books will it hold?

5. Deborah needs to make 16 costumes for the school play. Each costume requires $2\frac{1}{4}$ yards of material. How many yards of material will she need?

6. The Coffee Pub has cans of coffee that weigh $3\frac{1}{4}$ pounds each. The Pub has $8\frac{1}{2}$ cans of coffee left. What is the total weight of $8\frac{1}{2}$ cans?

7. Belinda baked 9 pies that weigh $20\frac{1}{4}$ pounds total. How much does each pie weigh?

8. A piece of paper is $\frac{4}{1000}$ inches thick. How many sheets of paper will it take to make a stack 1 inch high?

9. Tanya has read $\frac{3}{4}$ of a book, which is 390 pages. How many pages are in the entire book?

10. DJ Gabe is going to serve $\frac{1}{3}$ of a whole pizza to each guest at his party. If he expects 24 guests, how many pizza's will he need?

Exercise 5 (answers on page 40)

Solve the following fraction word problems. Cancel and simplify your answers.

1. A stack of boards is 21 inches high. Each board is $1\frac{3}{4}$ inches thick. How many boards are there?

$21 \div 1\frac{3}{4}$

How many $1\frac{3}{4}$ in boards are in the 21 stack

$\frac{21}{1} \div \frac{7}{4}$

$\frac{3}{\cancel{21}} \cdot \frac{4}{\cancel{7}_1} = \frac{12}{1} =$ **12 boards**

2. A satellite makes 4 revolutions of the earth in one day. How many revolutions would it make in $6\frac{1}{2}$ days?

4 in 1 day, 8 in 2 days ...

Repeated + → ·

$4 \cdot 6\frac{1}{2}$

$\frac{4}{1} \cdot \frac{13}{2} = \frac{52}{2} =$ **26 revolutions**

3. A bolt has $16\frac{1}{2}$ turns per inch. How many turns would be in $2\frac{1}{2}$ inches of threads?

$\times 2\frac{1}{2}$ ($16\frac{1}{2}$ turns in 1 inch → turns in $2\frac{1}{2}$ inches) $\times 2\frac{1}{2}$

$16\frac{1}{2} \cdot 2\frac{1}{2}$

$\frac{33}{2} \cdot \frac{5}{2} = \frac{165}{4} =$ **$41\frac{1}{4}$ turns**

4. If a bookshelf is $28\frac{1}{8}$ inches long, how many $1\frac{7}{8}$ inch thick books will it hold?

How many $1\frac{7}{8}$ in books fit on $28\frac{1}{8}$ in bookshelf

$28\frac{1}{8} \div 1\frac{7}{8}$

$\frac{225}{8} \div \frac{15}{8}$

$\frac{15}{1} \frac{\cancel{225}}{\cancel{8}} \cdot \frac{8^1}{\cancel{15}_1} = \frac{15}{1} =$ **15 books**

5. Deborah needs to make 16 costumes for the school play. Each costume requires $2\frac{1}{4}$ yards of material. How many yards of material will she need?

$2\frac{1}{4}$ for 1 costume, another $2\frac{1}{4}$ for 2 ...

$16 \cdot 2\frac{1}{4}$

$\frac{4}{1} \frac{\cancel{16}}{1} \cdot \frac{9}{\cancel{4}_1} =$ **36 yards**

6. The Coffee Pub has cans of coffee that weigh $3\frac{1}{4}$ pounds each. The Pub has $8\frac{1}{2}$ cans of coffee left. What is the total weight of $8\frac{1}{2}$ cans?

$3\frac{1}{4}$ pounds for 1 can, another $3\frac{1}{4}$ for 2 ...

$3\frac{1}{4} \cdot 8\frac{1}{2}$

$\frac{13}{4} \cdot \frac{17}{2} = \frac{221}{8} = 27\frac{5}{8}$ pounds

7. Belinda baked 9 pies that weigh $20\frac{1}{4}$ pounds total. How much does each pie weigh?

How many 9 are in $20\frac{1}{4}$

$20\frac{1}{4} \div 9$

$\frac{81}{4} \cdot \frac{1}{9} = \frac{9}{4} = 2\frac{1}{4}$ pounds

8. A piece of paper is $\frac{4}{1000}$ inches thick. How many sheets of paper will it take to make a stack 1 inch high?

How many $\frac{4}{1000}$ fit in 1 inch

$1 \div \frac{4}{1000}$

$\frac{1}{1} \cdot \frac{1000}{4} = \frac{250}{1} =$ 250 sheets of paper

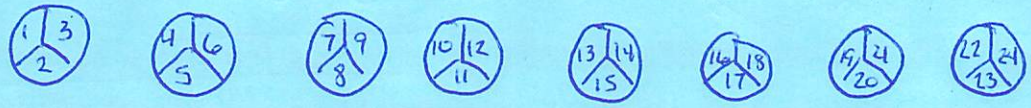
9. Tanya has read $\frac{3}{4}$ of a book, which is 390 pages. How many pages are in the entire book?

$\frac{3}{4}$ of ___ is 390

$390 \div \frac{3}{4}$

$\frac{390}{1} \cdot \frac{4}{3} = \frac{520}{1} =$ 520 pages in the book

10. DJ Gabe is going to serve $\frac{1}{3}$ of a whole pizza to each guest at his party. If he expects 24 guests, how many pizza's will he need?



$\frac{1}{3} \cdot 24$

$\frac{1}{3} \cdot \frac{24}{1} = 8$ pizzas

x24 ($\frac{1}{3}$ feeds 1 guest
feeds 24 guests) x24