Name _____

Another Look!

You can add, subtract, multiply, or divide measures of time to solve problems.

Ann worked 5 years 7 months at her first job. She worked 3 years 3 months at her second job.

Add

How long did Ann work at her first and second job?

$$5 \text{ years} \quad 7 \text{ months}$$
$$+ \ 3 \text{ years} \quad 3 \text{ months}$$
$$8 \text{ years } 10 \text{ months}$$

Subtract

How much longer did Ann work at her first job than her second job?

$$5 \text{ years } 7 \text{ months}$$
$$- \ 3 \text{ years } 3 \text{ months}$$
$$2 \text{ years } 4 \text{ months}$$

Ann worked 6 times longer at her fourth job than her third job. Ann worked $1\frac{1}{2}$ years at her third job.

Multiply

How long did Ann work at her fourth job?

$$6 \times 1\frac{1}{2} = (6 \times 1) + \left(6 \times \frac{1}{2}\right)$$
$$= 6 + \frac{6}{2}$$
$$= 6 + 3$$
$$= 9 \text{ years}$$

Divide

Ann was employed for 546 days at her third job. How many weeks was Ann employed? There are 7 days in one week.

$$546 \div 7 = 78 \text{ weeks}$$

For **1–9**, add, subtract, multiply, or divide.

DATA

Units of Time		
1 hour = 60 minutes	1 day = 24 hours	1 decade = 10 years
1 year = 12 months	1 week = 7 days	1 minute = 60 seconds

1.   8 hours 12 minutes
     + 3 hours 15 minutes

2.   9 weeks 5 days
     − 1 week 6 days

3.   3 hours 6 minutes 45 seconds
     + 8 hours 55 minutes 20 seconds

4.   1 decade 8 years
     −   9 years

5.   12 days 6 hours
     +   8 days 18 hours

6.   5 decades 4 years 3 months
     − 2 decades 5 years 6 months

7. How many weeks are in 42 days?

8. What is $8 \times \frac{3}{4}$ hour?

9. How many minutes are in $9\frac{1}{4}$ hours?

10. Beth works $8\frac{2}{4}$ hours, drives $1\frac{1}{4}$ hours, cooks $\frac{3}{4}$ hour, and sleeps $7\frac{2}{4}$ hours each day. How many hours of free time does Beth have each day? Remember, there are 24 hours in a day.

11. Ryan spends $10\frac{1}{2}$ hours at work each day. He has a $\frac{3}{4}$-hour lunch and receives two $\frac{1}{4}$-hour breaks. How much time does Ryan spend working? Remember, you can write an equivalent fraction for $10\frac{1}{2}$.

12. The Baltimore Marathon features a relay race. The times for each leg run by a winning team are shown in the table at the right. What is the total time it took this team to run all four legs of the marathon?

DATA

Baltimore Marathon Winner Results	
Leg of Race	Time Run
Leg 1	32 minutes 56 seconds
Leg 2	42 minutes 28 seconds
Leg 3	34 minutes 34 seconds
Leg 4	39 minutes 2 seconds

13. © **MP.4 Model with Math** What time does Mia have to leave for school if it takes 45 minutes to get to school? School starts at 7:30 A.M. Draw a number line to explain.

14. **Higher Order Thinking** Mr. Kent teaches 7 classes that are each 50 minutes long. He also has a 30-minute lunch break. How much time does Mr. Kent spend teaching class and at lunch?

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15. If Tom brushes his teeth $\frac{1}{12}$ hour a day, how many minutes does Tom brush his teeth in 2 weeks? What units of time do you need to change to solve this problem? Write and solve equations.

16. A woman from England sneezed 978 days in a row. About how many weeks did she sneeze in a row? What units of time do you need to change to solve this problem? Write and solve an equation.