



Problems involving time

Find the answer to each problem.

A yard sale began at 12 P.M. and ended at 4:35 P.M. How long did it last?

$12:00 \rightarrow 4:00 = 4 \text{ h}$
 $4:00 \rightarrow 4:35 = 35 \text{ min}$
Total = 4 h 35 min

4 h 35 min

Fred's watch says 2:27. What time will it say in 1 h 26 min?

$2:27 + 1 \text{ h} = 3:27$
 $3:27 + 26 \text{ min} = 3:53$

3:53

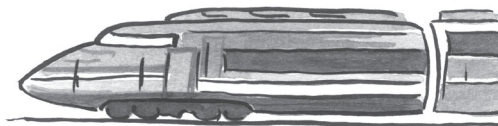
Rachel begins painting fences at 12:15 P.M. and finishes at 4:45 P.M. If she paints 3 fences, how long does each one take?



Joy works from 9 A.M. until 5 P.M. every day. If she takes an hour's lunch break, how many hours does she work altogether from Monday through Friday?



A train leaves at 2:29 P.M. and arrives at 10:47 P.M. How long does the trip take?



A castle has a 24-hour guard on the gate. Three soldiers share the work equally. If the first soldier starts his duty at 2:30 P.M., what times will the other two soldiers start their duties?

Soldier 2

Soldier 3



Kobe wants to videotape a program that starts at 3:30 P.M. and finishes at 5 P.M. If the program is on every day for the next five days, how many hours will he videotape?





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Find the answer to each problem.

A yard sale began at 12 P.M. and ended at 4:35 P.M. How long did it last?

$$\begin{aligned} 12:00 &\rightarrow 4:00 = 4 \text{ h} \\ 4:00 &\rightarrow 4:35 = 35 \text{ min} \\ \text{Total} &= 4 \text{ h } 35 \text{ min} \end{aligned}$$

4 h 35 min

Fred's watch says 2:27. What time will it say in 1 h 26 min?

$$\begin{aligned} 2:27 + 1 \text{ h} &= 3:27 \\ 3:27 + 26 \text{ min} &= 3:53 \end{aligned}$$

3:53

Rachel begins painting fences at 12:15 P.M. and finishes at 4:45 P.M. If she paints 3 fences, how long does each one take?

1.5 h



$$\begin{aligned} 12:15 &\rightarrow 4:15 = 4 \text{ h} \\ 4:15 &\rightarrow 4:45 = 0.5 \text{ h} \\ 4.0 &\quad 3 \overline{) 4.5} \\ + 0.5 &\quad \underline{3} \quad 15 \\ \underline{4.5} &\quad \underline{15} \quad 0 \end{aligned}$$

Joy works from 9 A.M. until 5 P.M. every day. If she takes an hour's lunch break, how many hours does she work altogether from Monday through Friday?

35 h



$$\begin{aligned} 9 \text{ A.M.} &\rightarrow 5 \text{ P.M.} = 8 \text{ h} \\ 8 \text{ h} - 1 \text{ h} &= 7 \text{ h} \\ 7 &\quad \times 5 \\ \underline{35} & \end{aligned}$$

A train leaves at 2:29 P.M. and arrives at 10:47 P.M. How long does the trip take?

8 h 18 min



$$\begin{aligned} 2:29 &\rightarrow 10:29 = 8 \text{ h} \\ 10:29 &\rightarrow 10:47 = 18 \text{ min} \end{aligned}$$

A castle has a 24-hour guard on the gate. Three soldiers share the work equally. If the first soldier starts his duty at 2:30 P.M., what times will the other two soldiers start their duties?

Soldier 2 10:30 P.M.

Soldier 3 6:30 A.M.



$$\begin{aligned} 8 &\quad 3 \overline{) 24} \\ 24 &\quad \underline{24} \quad 8 \text{ h each} \\ 0 & \end{aligned}$$

$$\begin{aligned} 2:30 \text{ P.M.} + 8 \text{ h} &\rightarrow 10:30 \text{ P.M.} \\ 10:30 \text{ P.M.} + 8 \text{ h} &\rightarrow 6:30 \text{ A.M.} \end{aligned}$$

Kobe wants to videotape a program that starts at 3:30 P.M. and finishes at 5 P.M. If the program is on every day for the next five days, how many hours will he videotape?

7.5 h



$$\begin{aligned} 3:30 &\rightarrow 4:30 = 1 \text{ h} \\ 4:30 &\rightarrow 5:00 = 0.5 \text{ h} \\ 1 \text{ h} + 0.5 \text{ h} &= 1.5 \text{ h} \\ 1.5 &\quad \times 5 \\ \underline{7.5} & \end{aligned}$$

You may need to help children understand time periods so that they can manage the questions more easily. For example, borrowing an hour in a subtraction problem is the same as borrowing 60 minutes.