

Time

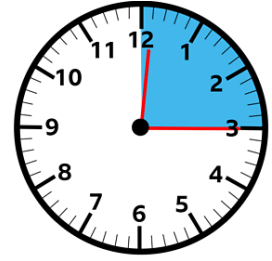
Content (5): duration, using measurement of time

- understanding elapsed time and duration
- applying concepts of time in real-life contexts and problem-based situations
- daily and seasonal cycles, moon cycles, tides, journeys, events

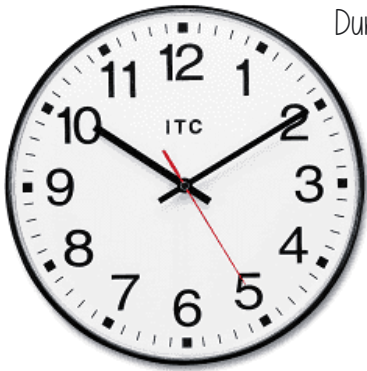
Curricular Competency (5+6): Reasoning and analyzing: Estimate reasonably

Curricular Competency (5): Communicating and Representing: Explain and justify mathematical ideas and decisions

First Peoples Principles of Learning: Learning is reflective



What is Duration?



Duration is the amount of time it takes for a process to complete. For example, if you check the time, then go out for a walk, then return and see fifteen minutes have elapsed, the duration of your walk was fifteen minutes.

There are 60 minutes in an hour.

There are 60 seconds in a minute.

Counting in 5s to work out duration

When the minute hand on a clock moves from one number to the next, it has moved 5 minutes.

There are 12 numbers around a clock face, and each interval between the numbers is 5 minutes, so there are $12 \times 5 = 60$ minutes in an hour.

Example

Look at the two clocks to the right.

Can you say how much time has passed between the first and second one?



Count the intervals between the numbers in 5 minutes.

The clock on the left shows the time as five past seven. The clock on the right shows twenty-five past seven.

We can count 4 intervals of 5 minutes between the two times, so $4 \times 5 = 20$.

The duration of time that has passed is 20 minutes.

Elapsed Time Duration

Count how many minutes have elapsed between the start time, and the end time



_____ : _____



_____ : _____

_____ hours



_____ : _____



_____ : _____

_____ hours



_____ : _____



_____ : _____

_____ hours



_____ : _____



_____ : _____

_____ hours



_____ : _____



_____ : _____

_____ hours



_____ : _____



_____ : _____

_____ hours

Elapsed Time Duration

Count how many minutes have elapsed between the start time, and the end time



:



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_____ hours



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_____ hours



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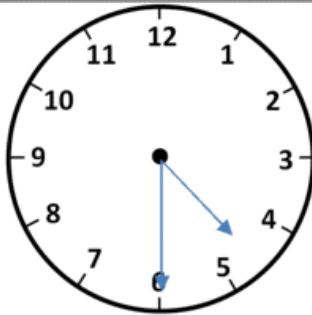
_____ hours

Elapsed Time Duration

Count how many minutes have elapsed between the start time, and the end time



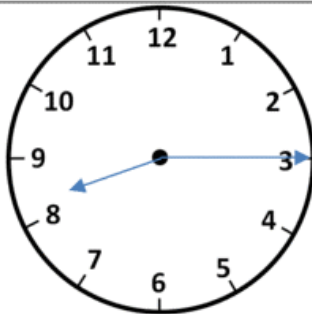
TO



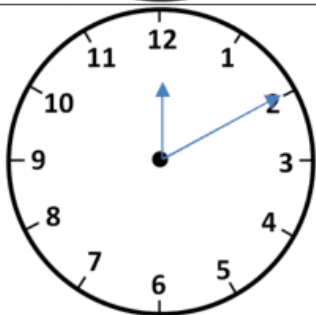
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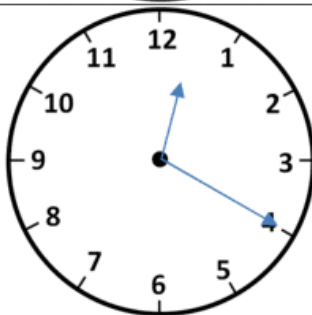
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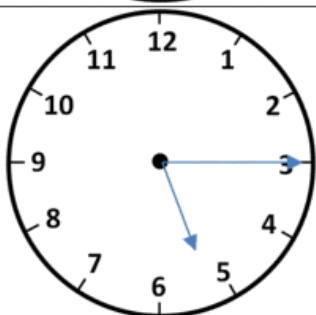
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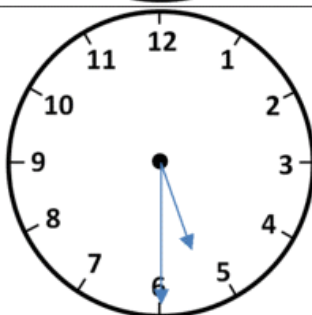
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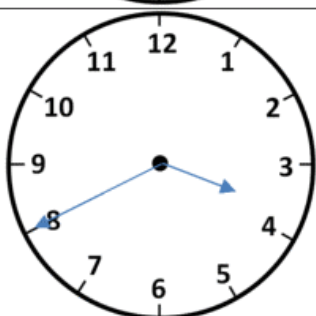
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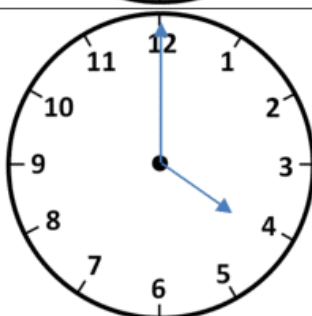
TO



_____ minutes



TO



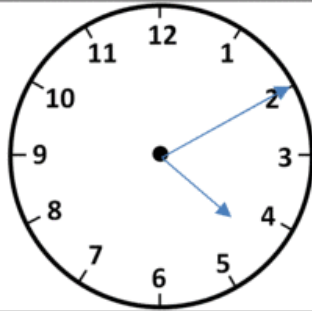
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Elapsed Time Duration

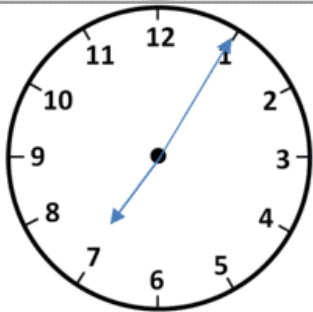
Count how many minutes have elapsed between the start time, and the end time



TO



_____ minutes



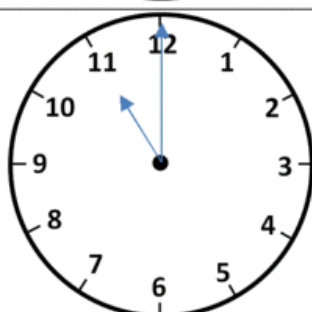
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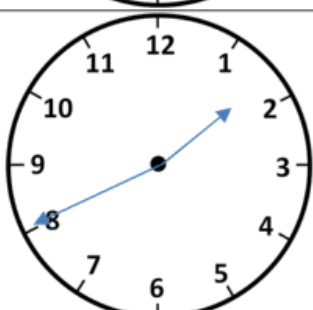
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TO



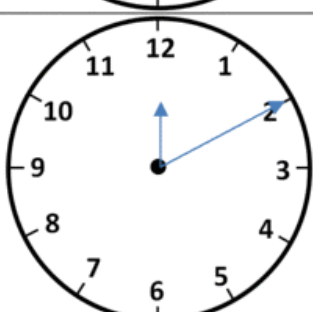
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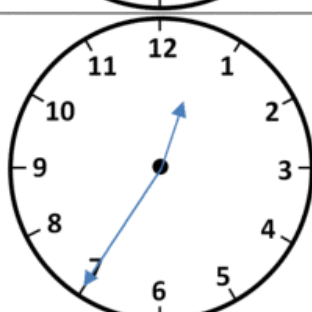
TO



_____ minutes



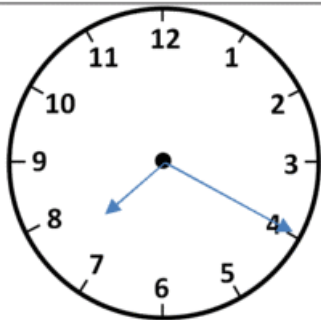
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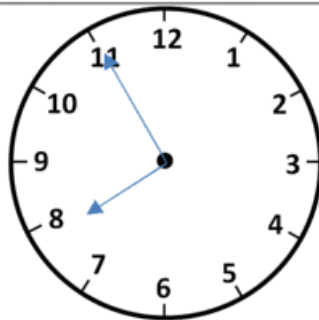
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Elapsed Time Duration

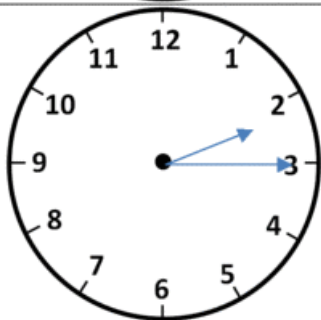
Count how many minutes have elapsed between the start time, and the end time



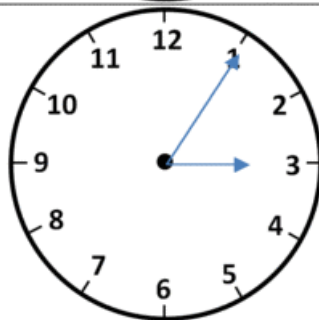
TO



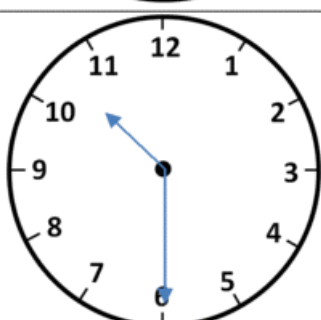
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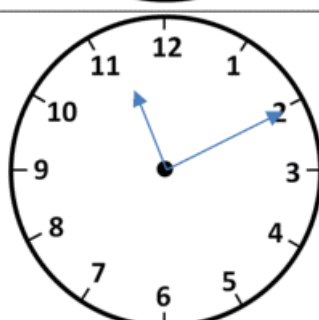
TO



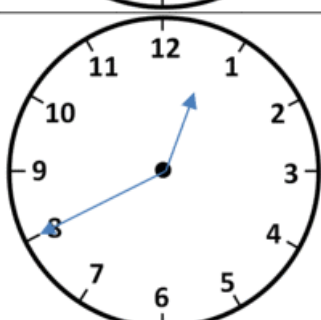
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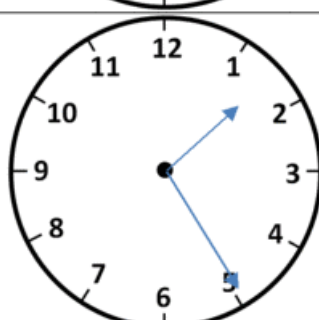
TO



_____ minutes



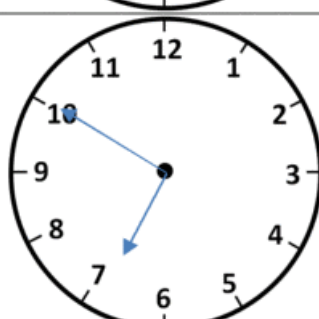
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_____ minutes



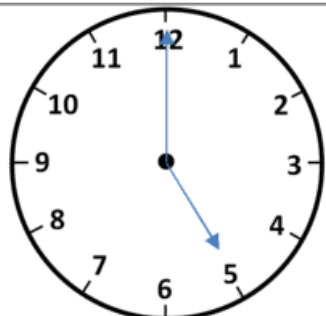
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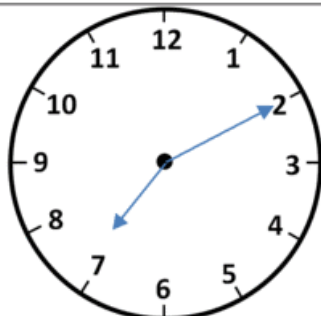
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Elapsed Time Duration

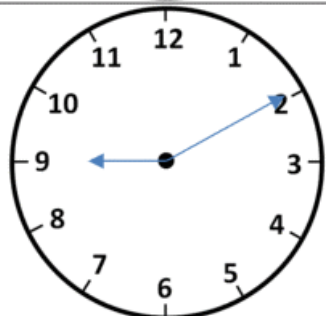
Count how many minutes have elapsed between the start time, and the end time



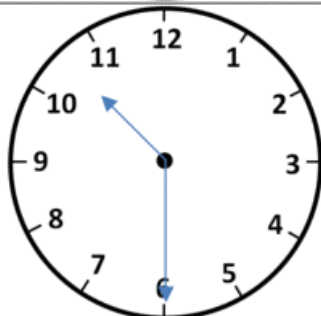
TO



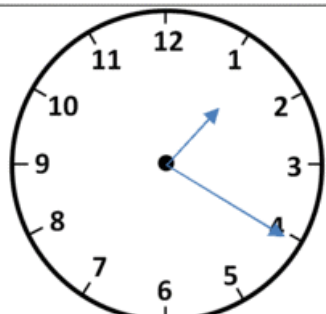
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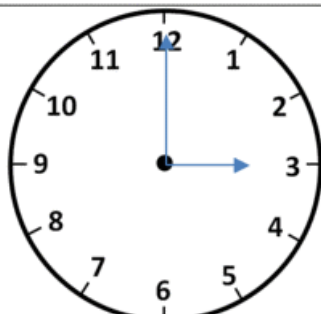
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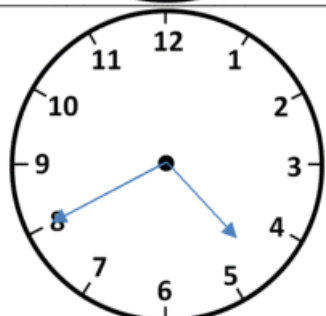
___ hours ___ minutes



TO



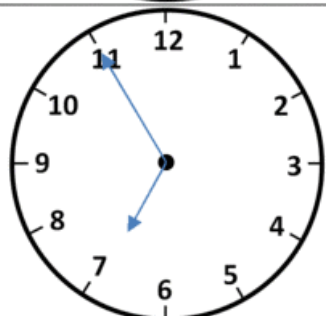
___ hours ___ minutes



TO



___ hours ___ minutes



TO



___ hours ___ minutes

Elapsed Time Duration

Count how many minutes have elapsed between the start time, and the end time



TO



___ hours ___ minutes



TO



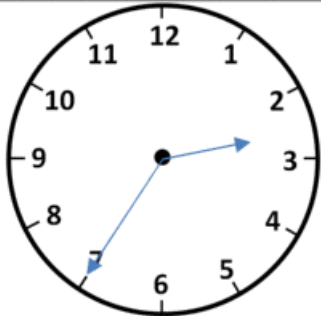
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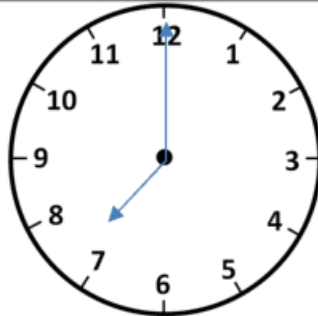
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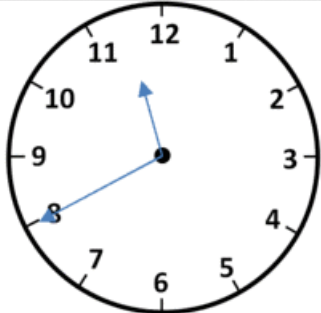
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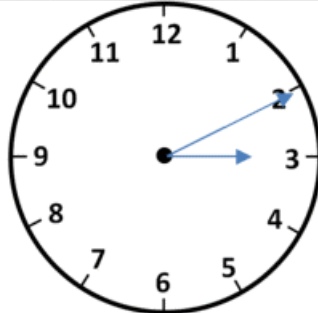
TO



___ hours ___ minutes



TO



___ hours ___ minutes

Elapsed Time Duration

Count how many minutes have elapsed between the start time, and the end time



_____ : _____



_____ : _____

_____ hours, _____ minutes



_____ : _____



_____ : _____

_____ hours, _____ minutes



_____ : _____



_____ : _____

_____ hours, _____ minutes



_____ : _____



_____ : _____

_____ hours, _____ minutes



_____ : _____



_____ : _____

_____ hours, _____ minutes



_____ : _____



_____ : _____

_____ hours, _____ minutes

Elapsed Time Duration

Count how many minutes have elapsed between the start time, and the end time



____ : ____



____ : ____

_____ hours, _____ minutes



____ : ____



____ : ____

_____ hours, _____ minutes



____ : ____



____ : ____

_____ hours, _____ minutes



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_____ hours, _____ minutes



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_____ hours, _____ minutes



____ : ____



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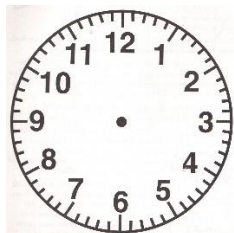
_____ hours, _____ minutes

Elapsed Time Duration

Count how many minutes have elapsed between the start time, and the end time

TIME FROM	TIME TO	ELAPSED TIME
4:30pm	4:50pm	_____ minutes
8:00am	8:40am	_____ minutes
9:15am	9:30am	_____ minutes
11:20am	12:00 noon	_____ minutes
12:45pm	1:05pm	_____ minutes
4:50pm	5:20pm	_____ minutes
3:10pm	3:45pm	_____ minutes
11:40am	12:05pm	_____ minutes

TIME FROM	TIME TO	ELAPSED TIME
3:50pm	4:30pm	_____ hours _____ minutes
6:00pm	7:20pm	_____ hours _____ minutes
1:15pm	3:30pm	_____ hours _____ minutes
4:20pm	7:00pm	_____ hours _____ minutes
1:25pm	2:10pm	_____ hours _____ minutes
8:40am	10:05am	_____ hours _____ minutes
8:30pm	11:10pm	_____ hours _____ minutes
11:30am	1:55pm	_____ hours _____ minutes



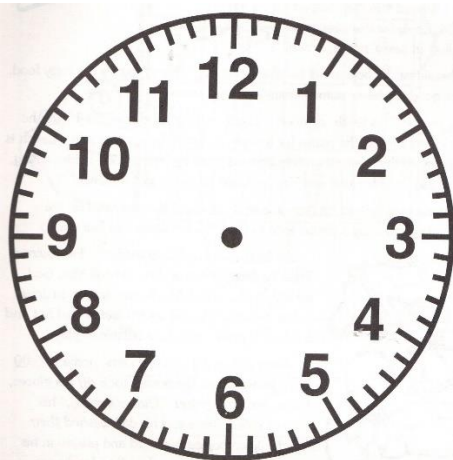
Elapsed Time Duration

Count how many minutes have elapsed between the start time, and the end time

TIME FROM	TIME TO	ELAPSED TIME
1:25pm	4:50pm	___ hours ___ minutes
10:40am	2:10pm	___ hours ___ minutes
3:35pm	4:20pm	___ hours ___ minutes
1:45pm	5:00pm	___ hours ___ minutes
10:55am	4:35pm	___ hours ___ minutes
10:30pm	6:00am	___ hours ___ minutes
7:45am	3:10pm	___ hours ___ minutes

2) Fill in the missing times on the chart.

TIME FROM	TIME TO	ELAPSED TIME
3:25pm	_____	3 hours 10 minutes
_____	5:10pm	1 hours 40 minutes
_____	3:50pm	2 hours 25 minutes
11:45am	_____	1 hours 50 minutes
2:50pm	_____	4 hours 15 minutes



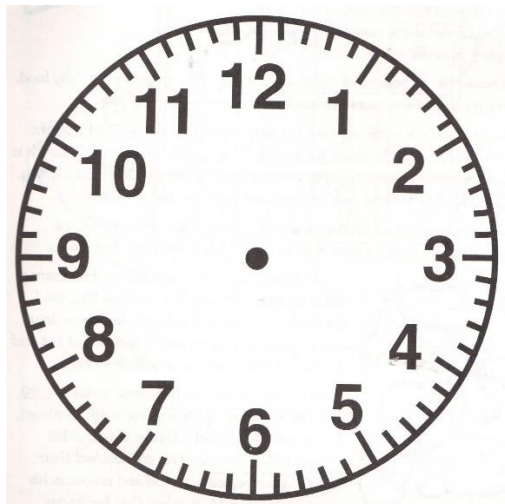
Elapsed Time Duration

Count how many minutes have elapsed between the start time, and the end time

TIME FROM	TIME TO	ELAPSED TIME
13:05	18:30	____ hours ____ minutes
11:45	15:30	____ hours ____ minutes
14:15	20:50	____ hours ____ minutes
12:40	16:05	____ hours ____ minutes
07:20	13:15	____ hours ____ minutes
17:45	21:20	____ hours ____ minutes
22:40	06:30	____ hours ____ minutes

2) Fill in the missing times on the chart.

TIME FROM	TIME TO	ELAPSED TIME
09:40	_____	1 hours 40 minutes
_____	13:25	3 hours 20 minutes
_____	18:10	2 hours 30 minutes
08:20	_____	5 hours 45 minutes
14:35	_____	4 hours 30 minutes



1) Draw lines to match the time that is one hour later:

8:10am	9:30pm
2:40pm	7:00am
11:20am	1:45pm
6:00am	3:40pm
8:30pm	9:10am
12:45pm	12:20pm

A line is drawn from 8:10am to 9:10am.

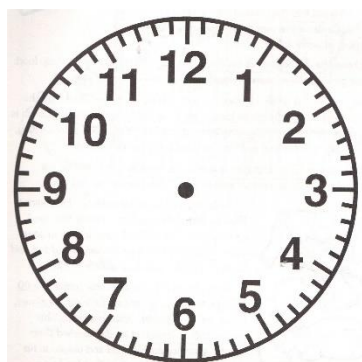
2) Draw lines to match the time that is one hour earlier:

10:30am	1:10pm
4:00pm	5:45am
2:10pm	3:00pm
7:25am	6:25am
9:50pm	9:30am
6:45am	8:50pm

A line is drawn from 10:30am to 9:30am.

3) Write in the missing time:

- a) 1 hour earlier than 5:50pm is _____.
- b) 1 hours later than 9:30am is _____.
- c) 2 hours earlier than 8:10pm is _____.
- d) 1 hour later than 12:40pm is _____.
- e) 1 hour earlier than 12:20am is _____.



1) Add one hour to each of these times:

a) 8:00am →

b) 3:10pm →

c) 11:25am →

d) 2:55pm →

e) 12:24pm →

f) 11:06am →

2) Subtract one hour from each of these times:

a) 7:20am →

b) 4:15pm →

c) 10:30pm →

d) 8:55am →

e) 1:45pm →

f) 10:05am →

3) Circle the correct answers in each sentence. The first one is done for you.

5:20pm is	1 hour	<u>2 hours</u>	3 hours	earlier	<u>later</u>	than 3:20pm
8:40am is	1 hour	2 hours	3 hours	earlier	later	than 9:40am
7:15pm is	1 hour	2 hours	3 hours	earlier	later	than 5:15pm
10:15am is	1 hour	2 hours	3 hours	earlier	later	than 1:15 pm

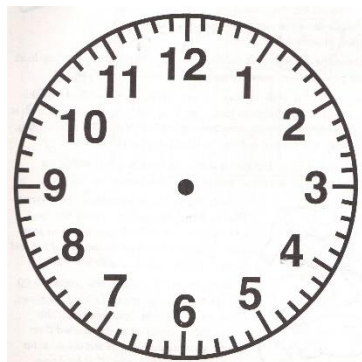
4) Write in the missing time:

a) 1 hour earlier than 8:10am is _____.

b) 2 hours later than 4:15pm is _____.

c) 4 hours later than 9:50am is _____.

d) 3 hours earlier than 1:40pm is _____.



1) Draw lines to match the time that is 10 minutes later:

8:10am

2:40pm

11:20am

6:00am

8:30pm

12:45pm

2:50pm

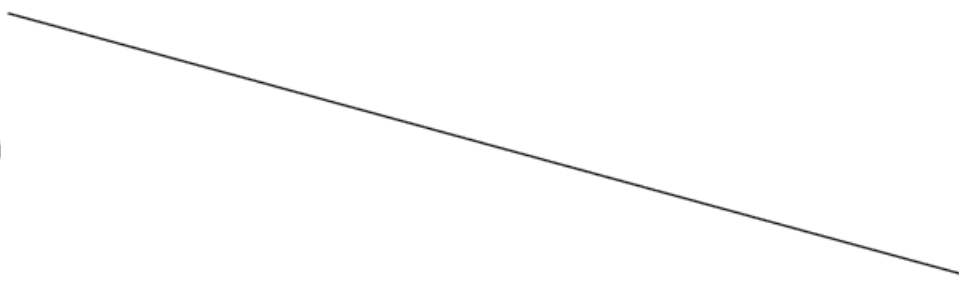
6:10am

8:40pm

11:30am

8:20am

12:55pm



2) Draw lines to match the time that is 10 minutes earlier:

10:30am

4:10pm

2:50pm

7:25am

9:50pm

6:15am

4:00pm

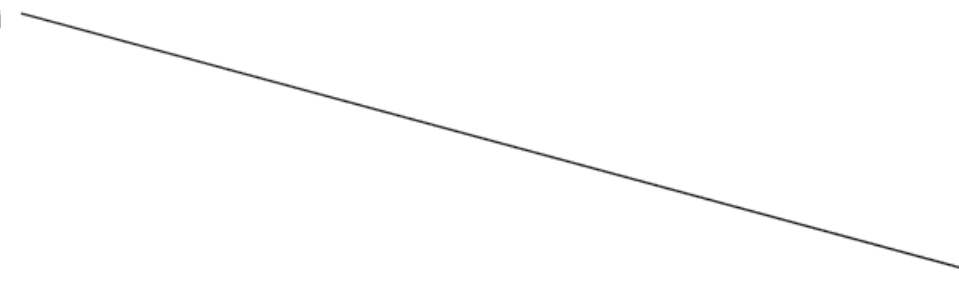
2:40am

3:00pm

6:05am

10:20am

9:40pm



3) Write in the missing time:

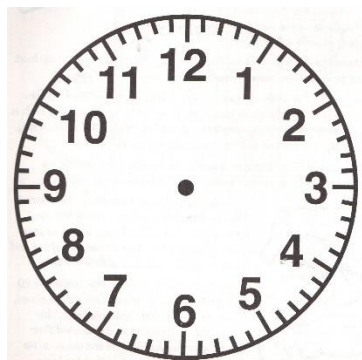
a) 10 minutes **earlier** than 2:50pm is _____.

b) 10 minutes **later** than 11:30am is _____.

c) 20 minutes **earlier** than 8:50pm is _____.

d) 20 minutes **later** than 12:50pm is _____.

e) 10 minutes **earlier** than 9:00am is _____.



1) Add 20 minutes to each of these times:

a) 8:00am →

b) 3:15pm →

c) 11:25am →

d) 12:55pm →

e) 11:50am →

f) 10:45am →

2) Subtract 20 minutes from each of these times:

a) 7:20am →

b) 1:45pm →

c) 10:10pm →

d) 7:15am →

e) 1:45pm →

f) 12:10pm →

3) Circle the correct answers in each sentence. The first one is done for you.

5:20pm is	<u>10</u> 20 30 minutes	earlier <u>later</u>	than 5:10pm
8:40am is	10 20 30 minutes	earlier later	than 9:00am
7:15pm is	10 20 30 minutes	earlier later	than 6:55pm
10:15am is	10 20 30 minutes	earlier later	than 10:45am

4) Write in the missing time:

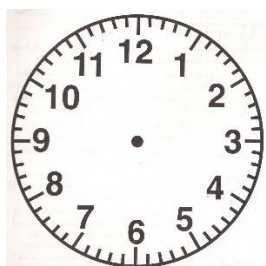
a) 10 minutes earlier than 8:10am is _____.

b) 20 minutes later than 4:15pm is _____.

c) 15 minutes later than 9:50am is _____.

d) 30 minutes earlier than 1:40pm is _____.

e) 30 minutes later than 11:45am is _____.



1) Add 15 minutes to each of these times:

a) 7:20am →

b) 4:45pm →

c) 9:35am →

d) 12:50pm →

e) 11:55am →

f) 7:50am →

2) Subtract 15 minutes from each of these times:

a) 9:30am →

b) 3:50pm →

c) 10:15pm →

d) 8:00am →

e) 12:05pm →

f) 1:10pm →

3) Circle the correct answers in each sentence. The first one is done for you.

5:00pm is	☒ 10 15 20 minutes	earlier ☒ later	than 4:50pm
8:15am is	10 15 20 minutes	earlier later	than 8:30am
7:05pm is	10 15 20 minutes	earlier later	than 6:45pm
12:10pm is	10 15 20 minutes	earlier later	than 12:25pm

4) Write in the missing time:

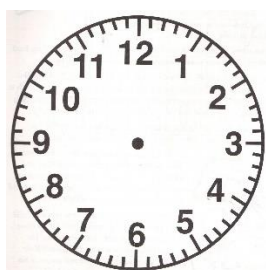
a) 20 minutes earlier than 8:10am is _____.

b) 15 minutes later than 4:05pm is _____.

c) 15 minutes later than 11:50am is _____.

d) 25 minutes earlier than 1:00pm is _____.

e) 40 minutes earlier than 9:45am is _____.



1) Add on the minutes to each of these times:

a) 3:20pm + 30 mins →

b) 6:45pm + 15 mins →

c) 8:15am + 25 mins →

d) 2:50pm + 40 mins →

e) 11:35am + 50 mins →

f) 7:40am + 35 mins →

2) Subtract the minutes from each of these times:

a) 10:40am – 20 mins →

b) 2:50pm – 15 mins →

c) 10:20pm – 30 mins →

d) 9:10am – 25 mins →

e) 12:15pm – 40 mins →

f) 1:35pm – 50 mins →

3) Work out how long the time interval is.

3:25pm	to	3:45pm	time interval is	20 minutes
4:30pm	to	5:10pm	time interval is	_____ minutes
10:25am	to	11:00am	time interval is	_____ minutes
12:50pm	to	1:15pm	time interval is	_____ minutes
7:25pm	to	8:05pm	time interval is	_____ minutes

4) Write in the missing time:

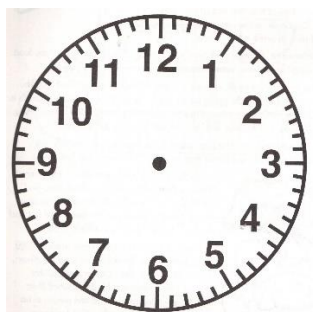
a) 25 minutes earlier than 9:40am is _____.

b) 30 minutes later than 7:35pm is _____.

c) 15 minutes later than 11:40am is _____.

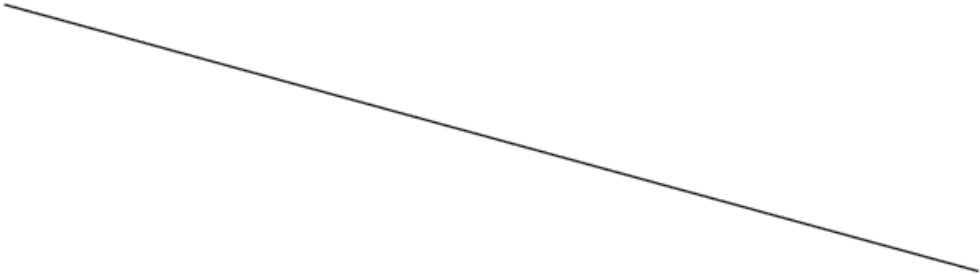
d) 25 minutes earlier than 1:10pm is _____.

e) 50 minutes earlier than 10:25am is _____.



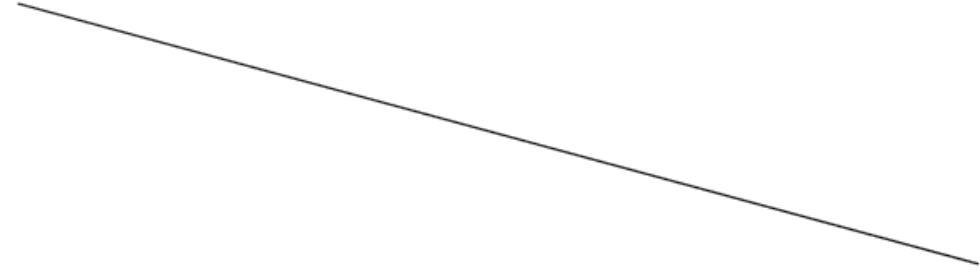
1) Draw lines to match the time that is 1 hour and 20 minutes later:

8:10am	9:50pm
2:40pm	7:20am
11:20am	1:55pm
6:00am	4:00pm
8:30pm	9:30am
12:35pm	12:40pm



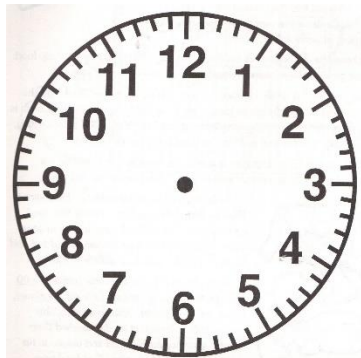
2) Draw lines to match the time that is 1 hour and 20 minutes earlier:

10:30am	12:50pm
4:00pm	5:25am
2:10pm	2:40pm
7:25am	6:05am
9:50pm	9:10am
6:45am	8:30pm



3) Write in the missing time:

- a) 1 hour and 10 minutes earlier than 3:50pm is _____.
- b) 2 hours and 5 minutes later than 9:20am is _____.
- c) 2 hours and 10 minutes earlier than 11:10pm is _____.
- d) 1 hour and 15 minutes later than 12:40pm is _____.
- e) 1 hour and 30 minutes earlier than 8:20am is _____.



1) Add the hours and minutes to each of these times:

a) 8:00am + 1h 20min →

b) 3:15pm + 2h 10min →

c) 11:25am + 3h →

d) 12:55pm + 40min →

e) 11:50am + 1h 15min →

f) 8:15am + 2h 20min →

2) Subtract the hours and minutes from each of these times:

a) 7:20am – 1h 10min →

b) 1:45pm – 2h 5min →

c) 10:30pm – 1h 15min →

d) 7:15am – 4h →

e) 11:25pm – 2h 20min →

f) 12:10pm – 1h 5min →

3) Work out how long the time interval is.

3:25pm to 4:35pm time interval is 1 hour 10 minutes

4:30pm to 6:50pm time interval is ___ hours ___ minutes

10:25am to 11:00am time interval is ___ hours ___ minutes

12:50pm to 3:00pm time interval is ___ hours ___ minutes

5:20pm to 9:00pm time interval is ___ hours ___ minutes

4) Write in the missing time:

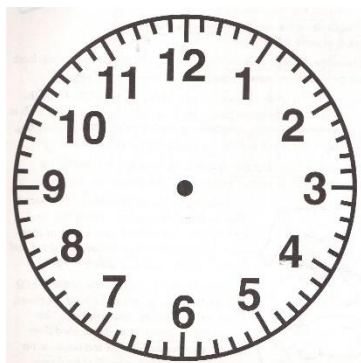
a) 1 hour and 10 minutes earlier than 7:50am is _____.

b) 2 hours and 20 minutes later than 6:15pm is _____.

c) 1 hour and 15 minutes later than 8:10am is _____.

d) 50 minutes earlier than 1:20pm is _____.

e) 3 hours and 30 minutes later than 10:25am is _____.



1) Add the hours and minutes to each of these times:

a) $7:10\text{am} + 1\text{h } 30\text{min} \rightarrow$

b) $5:15\text{pm} + 2\text{h } 5\text{min} \rightarrow$

c) $10:55\text{am} + 3\text{h} \rightarrow$

d) $12:35\text{pm} + 45\text{min} \rightarrow$

e) $10:50\text{am} + 2\text{h } 15\text{min} \rightarrow$

f) $9:45\text{am} + 3\text{h } 10\text{min} \rightarrow$

2) Subtract the hours and minutes from each of these times:

a) $9:20\text{am} - 2\text{h } 10\text{min} \rightarrow$

b) $1:35\text{pm} - 2\text{h } 15\text{min} \rightarrow$

c) $11:40\text{pm} - 1\text{h } 15\text{min} \rightarrow$

d) $2:15\text{pm} - 5\text{h} \rightarrow$

e) $3:05\text{pm} - 2\text{h } 20\text{min} \rightarrow$

f) $1:20\text{pm} - 2\text{h } 40\text{min} \rightarrow$

3) Work out how long the time interval is.

1:25pm to 3:35pm time interval is 2 hours 10 minutes

3:20pm to 4:50pm time interval is ___ hours ___ minutes

8:25am to 10:00am time interval is ___ hours ___ minutes

12:50pm to 4:10pm time interval is ___ hours ___ minutes

8:50pm to 11:30pm time interval is ___ hours ___ minutes

4) Write in the missing time:

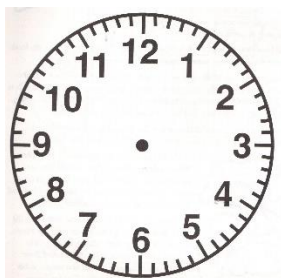
a) 1 hour and 25 minutes earlier than 9:00am is _____.

b) 2 hours and 30 minutes later than 4:45pm is _____.

c) 1 hour and 15 minutes later than 11:10am is _____.

d) 50 minutes earlier than 12:25pm is _____.

e) 4 hours and 5 minutes later than 8:35am is _____.



1) Work out these time intervals in minutes and seconds:

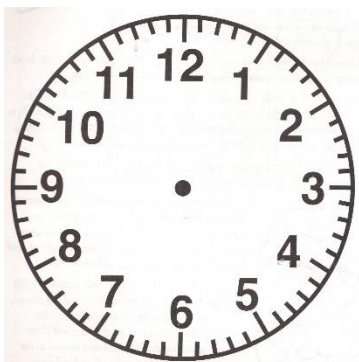
- a) 4 minutes 30 seconds + 2 minutes 10 seconds = ____ min ____ sec
b) 8 minutes 10 seconds + 5 minutes 25 seconds = ____ min ____ sec
c) 3 minutes 40 seconds + 2 minutes 30 seconds = ____ min ____ sec
d) 9 minutes 20 seconds – 1 minute 10 seconds = ____ min ____ sec
e) 10 minutes 50 seconds – 4 minutes 30 seconds = ____ min ____ sec
f) 6 minutes – 3 minutes 20 seconds = ____ min ____ sec

2) Work out these time intervals in hours and minutes:

- a) 3 hours 20 minutes + 2 hours 15 minutes = ____ hrs ____ min
b) 2 hours 5 minutes + 4 hours 50 minutes = ____ hrs ____ min
c) 7 hours 40 minutes + 3 hours 20 minutes = ____ hrs ____ min
d) 6 hours 30 minutes – 2 hours 20 minutes = ____ hrs ____ min
e) 3 hours 45 minutes – 1 hour 10 minutes = ____ hrs ____ min
f) 7 hours – 4 hours 40 minutes = ____ hrs ____ min

3) Work out these time intervals in days, weeks, months and years.

- a) 4 years 5 months + 2 years 6 months = ____ years ____ months
b) 5 weeks 4 days + 2 weeks 5 days = ____ weeks ____ days
c) 3 years 8 months + 5 years 10 months = ____ years ____ months
d) 7 weeks 5 days + 4 weeks 3 days = ____ weeks ____ days
e) 8 weeks 3 days – 3 weeks 2 days = ____ weeks ____ days
f) 5 years 9 months – 2 years 6 months = ____ years ____ months
g) 9 weeks 1 day – 3 weeks 5 days = ____ weeks ____ days
h) 8 years 2 months – 4 years 5 months = ____ years ____ months



1) Work out these time intervals in minutes and seconds:

- a) 3 minutes 25 seconds + 2 minutes 40 seconds = ____ min ____ sec
b) 2 minutes 50 seconds + 7 minutes 25 seconds = ____ min ____ sec
c) 5 minutes 45 seconds + 2 minutes 35 seconds = ____ min ____ sec
d) 10 minutes 10 seconds – 3 minutes 40 seconds = ____ min ____ sec
e) 9 minutes 5 seconds – 4 minutes 30 seconds = ____ min ____ sec
f) 25 minutes – 10 minutes 25 seconds = ____ min ____ sec

2) Work out these time intervals in hours and minutes:

- a) 4 hours 30 minutes + 2 hours 45 minutes = ____ hrs ____ min
b) 12 hours 50 minutes + 4 hours 35 minutes = ____ hrs ____ min
c) 7 hours 20 minutes + 135 minutes = ____ hrs ____ min
d) 6 hours 10 minutes – 2 hours 50 minutes = ____ hrs ____ min
e) 3 hours 15 minutes – 2 hours 35 minutes = ____ hrs ____ min
f) 11 hours – 105 minutes = ____ hrs ____ min

3) Work out these time intervals in days, weeks, months and years.

- a) 4 years 8 months + 3 years 9 months = ____ years ____ months
b) 5 weeks 4 days + 6 weeks 6 days = ____ weeks ____ days
c) 3 years 5 months + 27 months = ____ years ____ months
d) 7 weeks 2 days + 23 days = ____ weeks ____ days
e) 8 weeks 3 days – 2 weeks 5 days = ____ weeks ____ days
f) 6 years 3 months – 4 years 8 months = ____ years ____ months
g) 7 weeks 1 day – 35 days = ____ weeks ____ days
h) 6 years 3 months – 40 months = ____ years ____ months

