AC
EA
AA
AM
AP

Doing time
Challenging problems

We are learning to do time word problems.

1) Hamish is 4 months older than Ana
Megan is 7 months older than Hamish
Henare is 2 months older than Megan
How much older older than Hamish is Henare?

2) TV advertisements run for either 15 seconds, 30 seconds or 45 seconds. An ad break lasts $1\frac{1}{2}$ minutes. Write down four possible combinations of advertisements that would take that could be used.

3) Stephanie interested in how fast she can walk. She found out that she can walk 30 metres in 20 seconds. If she continues to walk at the same speed, how far would she have walked in:

a) 3 minutes?
b) 15 minutes?
c) 20 minutes?

4) Amber is in a car her on the way to visit her grandmother. Her father, a policeman, assures her he is travelling on average 84 km/hr.

a) After $\frac{1}{4}$ of an hour Amber's brother starts to feel unwell and her father needs to stop the car. How far have they travelled?
b) If Amber's grandmother lives $2\frac{1}{2}$ hours away, what distance will they travel?
c) How long would it take them to travel 252 km?

5) Amber's grandmother is cooking a roast for their Sunday dinner. It weighs 4 kilograms and needs to be cooked 40 minutes for every kilogram of weight. She puts it in the oven at 9.50 am.

a) How long will the roast take to cook? Give your answer in hours and minutes.
b) If her family is due to arrive for lunch at 12.30 will the roast be ready in time? What time will it be ready?

6) Pip has started to train at the local pool.

a) In her first week she swims 50 metres a day. How far does she swim in total?
b) In the third week of her training Pip doubles the distance she swims. What distance would she have covered in total at the end of week 3?
c) How many days would it take Pip to swim 4 km, if she continues to swim 100m a day after the third week?

7) Zac is heading into town to have his hair streaked and decides to park in the parking building, where the parking rates are as follows: $3.50 for the first hour and $1.00 for every **half hour** thereafter.

   a) If Zac's car was parked in the building for 2 hours and 20 minutes, how much did he have to pay in parking fees?
   b) If Zac had to pay $9.50 in parking fees, how long did he park his car for?

8) Craig has a watch that is losing time. For every minute that passes his watch loses 10 seconds.

   a) If Craig set his watch correctly at 9am, what time would it show when it is 10am on the house clock?
   b) There is a rugby game on television that Craig wants to watch at 7.30pm. What time will this be on his watch?

9) Daniel and Teri are waiting at the station to catch a train. Daniel's train is scheduled to leave at 1.45pm and arrives 12 minutes late. If Teri's train is 20 minutes early and it is scheduled to leave at 2.35 pm, how many minutes are there between the times they both leave the station?

Challenging problems
Answers

1) 9 months

2) Possible combinations:
three 15 second and one 45 second
two 45 second
one 45 second, one 15 second and one 30 second
three 30 second
two 30 second and two 15 second
one 30 second and four 15 second
six 15 second

3a) 270 metres (b) 1350 metres or 1.35 km
c) 1800 metres or 1.8km

4a) 21 km (b) 210 km (c) 3 hours

5a) 2 hours and 40 minutes
b) Yes at 12.30 pm exactly

6a) 350 metres (b) 1400 metres (c) 47 days

7a) $6.50 (b) 4 hours

8a) 9.50 am
b) $10\frac{1}{2}$ hours = 105 minutes or 1 hour 45 minutes lost, so time will be 5.45 pm

9) 18 minutes