

GRAFFITI ARTIST

KEY CONCEPTS

- ★ Solving time problems involving passage of time
- ★ Addition of simple times using 24-hour time
- ★ Representing time on a time line

USEFUL RESOURCES

Clocks (digital and/or analogue), pencils and paper

STEP 1: THE PROBLEM

There are three suspects with alibis, but who is the graffiti artist?

Key questions

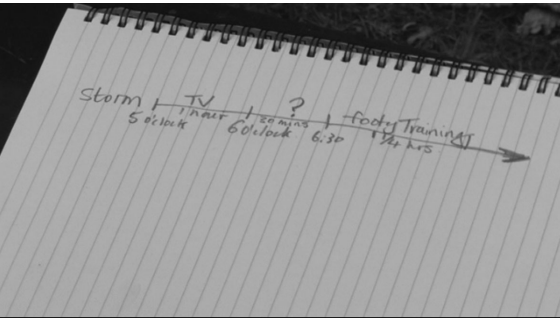


- When did the graffiti happen?
- Ben lives 10 minutes from the shop so how much time would he need if he did the graffiti?
- If it was 17:30, what time would that be in 12-hour time?
- Between what times did David do his homework?
- How could you keep track of who was where when?

STEP 2: REFLECTION

Angel suggests to James that he use a time line

Key questions (based on student solutions)



- Which strategies do you like best? Why?
- Which strategy makes it easy to see who the culprit is?
- Why is it so clear?
- What strategies do Angel and James Pond use?
- How are they similar to the ones that you used?

STEP 3: THE CHALLENGE

The shopkeeper's watch is slow. Did he find the right suspect?

Key questions



- If the shopkeeper's watch is running half an hour slow, what time is he actually away from the shop?
- Do you need to completely redo the solution or can you use some of the information you already have?
- Will you use a different strategy this time or a the same one? Why?

GRAFFITI ARTIST

THE PROBLEM

Graffiti artist clues:

Graffiti done between 18:00 and 18:45 and took 20 minutes.

Storm lives 10 minutes from the shop:

- watched TV until 17:30 for half an hour
- ate dinner with Mum for 10 minutes, then left for footy training around the corner from the shop
- arrived at 18:45 and trained for an hour

Ben lives 5 minutes from the shop:

- was at footy training until 18:30
- ate dinner at 19:00 and then watched TV all evening

David lives 10 minutes from the shop

- did his homework until 18:30
- ate dinner with his Dad at 18:45 and then walked the dog until 19:30
- watched his favourite TV show at 19:30



★ Can you sort out who could have done it?

CUT HERE

GRAFFITI ARTIST

THE CHALLENGE

The watch is half an hour slow, so the start and finish times are wrong.

Has he got the wrong person?



★ Who should be cleaning off the graffiti?