

Stretch and challenge Sequence tasks

Question 1:



A baby girl gains 0.5 lb in weight per week. If the baby weighs 8.2 lb at age 2 weeks, how much does she weigh when she is age

NOTE: 1 stone = 14lb

- 1) 3 weeks
- 2) 4 weeks
- 3) 5 weeks
- 4) How long will it be before she weighs more than 2 stones?

Question 2:



Jen opens a new email account. In the first week she receives 12 junk emails. Each week after that she receives 5 more emails than the previous week. How long before she receives over 200 junk emails a week?

Stretch and challenge Sequence tasks - Solutions

Question 1:

A baby girl gains 0.5 lb in weight per week. If the baby weighs 8.2 lb at age 2 weeks, how much does she weigh when she is age

$$n = 0.5 \times \text{weeks} + 8.2$$

1) After 3 weeks = $0.5 + 8.2 = 8.7$ lbs

1) After 4 weeks = $2 \times 0.5 + 8.2 = 1 + 8.2 = 9.2$ lbs

2) After 5 weeks = $3 \times 0.5 + 8.2 = 1.5 + 8.2 = 9.7$ lbs

3) 2 stone = $2 \times 14 = 28$ lbs

$$0.5w + 8.2 = 28 \quad \text{solve for } w$$

$$0.5w = 28 - 8.2$$

$$0.5w = 19.8$$

$$w = 19.8 \div 0.5 = 39.6 \text{ weeks round to 40 weeks}$$

CHECK: $0.5 \times 40 + 8.2 = 20 + 8.2 = 28.2$ lbs = more than 2 stones

$$0.5 \times 39 + 8.2 = 19.5 + 8.2 = 27.7 \text{ lbs so less than 2 stone}$$

Question 2:

Jen opens a new email account. In the first week she receives 12 junk emails. Each week after that she receives 5 more emails than the previous week. How long before she receives over 200 junk emails a week?

$$5 \times \text{week} + 12 = 200$$

$$5w + 12 = 200$$

$$5w = 200 - 12 = 188$$

$$W = 188 \div 5 = 37.6 \text{ weeks , round to 38 weeks;}$$

CHECK: $38 \times 5 = 190 + 12 = 202$ OVER 200

$$37 \times 5 = 185 + 12 = 197 \text{ LESS than 200}$$