**Using Worded Formulae GREEN**

1. Delia uses this rule to cook some beef.

|  |
| --- |
| Cooking time in minutes $=20×$ weight in pounds $+30$ |

The weight of the beef is 1.5 kg.

1 kg = 2.2 pounds.

(a) How long will the beef take to cook?

Kevin has a different piece of beef. The weight of his beef is 3 kg. Kevin says, “Because the weight of my piece of beef is twice the weight of Delia's piece of beef it will take twice as long to cook as Delia's piece took.”

(b) Is Kevin correct? Explain your answer.

2. Hayley is buying bottles of juice for a children's party. She uses this rule to work out the number of bottles of juice she needs.

|  |
| --- |
| Number of bottles $=$ Number of children $÷4+5$ |

There will be 24 children at the party.

(a) Work out the number of bottles of juice Hayley needs.

Hayley needs 13 bottles of juice for a different children's party. She used the same rule.

(b) Work out the number of children at this party.

3. This rule can be used to work out the time, in seconds, it takes to download music tracks.

|  |
| --- |
| Time $=25×$ number of music tracks $+10$ |

(a) Work out the time, in seconds, it takes to download 9 music tracks.

(b) How many music tracks can be downloaded in 360 seconds?

4. You can use this rule to work out the cost, in pounds, of hiring a drill.

|  |
| --- |
| Cost (£) = number of days hired $×8+20$  |

Janice hires a drill for 3 days.

(a) Work out the cost.

Karim hires the drill for 6 days. Janice says, "It will cost you twice as much as it cost me."

(b) Is Janice right? You must show how you got your answer.

5. Kimona is going to cook some meat. She uses this rule to work out the cooking time in minutes.

|  |
| --- |
| Cooking time in minutes $=$ weight of meat in kg $×40+15$ |

Kimona wants to finish cooking the meat at 1 pm. The weight of the meat is 1.5 kg. Work out the latest time Kimona can start to cook the meat.

6. Tracy uses this rule to work out the cost, in pounds, of printing invitations.

|  |
| --- |
| Cost (£) = number of invitations $×1.25+4$ |

(a) Work out the cost of printing 20 invitations.

Martin uses the same rule to work out the cost of printing invitations. The cost is £47.75

(b) Work out how many invitations Martin had printed.

**Using Worded Formulae AMBER**

1. Delia uses this rule to cook some beef.

|  |
| --- |
| Cooking time in minutes $=20×$ weight in pounds $+30$ |

The weight of the beef is 1.5 kg.

1 kg = 2.2 pounds.

(a) How long will the beef take to cook?

 Time $=20×3.3+30$

Kevin has a different piece of beef. The weight of his beef is 3 kg. Kevin says, “Because the weight of my piece of beef is twice the weight of Delia's piece of beef it will take twice as long to cook as Delia's piece took.”

Hint: work out how long Delia’s piece will take to cook

 (b) Is Kevin correct? Explain your answer.

2. Hayley is buying bottles of juice for a children's party. She uses this rule to work out the number of bottles of juice she needs.

|  |
| --- |
| Number of bottles $=$ Number of children $÷4+5$ |

There will be 24 children at the party.

(a) Work out the number of bottles of juice Hayley needs.

 Bottles $=24÷4+5$

Hayley needs 13 bottles of juice for a different children's party. She used the same rule.

Hint: solve this equation!

 (b) Work out the number of children at this party.

 $13=$ children $÷4+5$

 $-5$ $-5$

3. This rule can be used to work out the time, in seconds, it takes to download music tracks.

|  |
| --- |
| Time $=25×$ number of music tracks $+10$ |

(a) Work out the time, in seconds, it takes to download 9 music tracks.

(b) How many music tracks can be downloaded in 360 seconds?

4. You can use this rule to work out the cost, in pounds, of hiring a drill.

|  |
| --- |
| Cost (£) = number of days hired $×8+20$  |

Janice hires a drill for 3 days.

(a) Work out the cost.

Karim hires the drill for 6 days. Janice says, "It will cost you twice as much as it cost me."

(b) Is Janice right? You must show how you got your answer.

5. Kimona is going to cook some meat. She uses this rule to work out the cooking time in minutes.

|  |
| --- |
| Cooking time in minutes $=$ weight of meat in kg $×40+15$ |

Kimona wants to finish cooking the meat at 1 pm. The weight of the meat is 1.5 kg. Work out the latest time Kimona can start to cook the meat.

6. Tracy uses this rule to work out the cost, in pounds, of printing invitations.

|  |
| --- |
| Cost (£) = number of invitations $×1.25+4$ |

(a) Work out the cost of printing 20 invitations.

Martin uses the same rule to work out the cost of printing invitations. The cost is £47.75

(b) Work out how many invitations Martin had printed.

**Using Worded Formulae RED**

1. Delia uses this rule to cook some beef.

|  |
| --- |
| Cooking time in minutes $=20×$ weight in pounds $+30$ |

The weight of the beef is 1.5 kg.

1 kg = 2.2 pounds.

(a) How long will the beef take to cook?

 Time $=20×3.3+30$

Kevin has a different piece of beef. The weight of his beef is 3 kg. Kevin says, “Because the weight of my piece of beef is twice the weight of Delia's piece of beef it will take twice as long to cook as Delia's piece took.”

Hint: work out how long Delia’s piece will take to cook

 (b) Is Kevin correct? Explain your answer.

2. Hayley is buying bottles of juice for a children's party. She uses this rule to work out the number of bottles of juice she needs.

|  |
| --- |
| Number of bottles $=$ Number of children $÷4+5$ |

There will be 24 children at the party.

(a) Work out the number of bottles of juice Hayley needs.

 Bottles $=24÷4+5$

Hayley needs 13 bottles of juice for a different children's party. She used the same rule.

Hint: solve this equation!

 (b) Work out the number of children at this party.

 $13=$ children $÷4+5$

 $-5$ $-5$

3. This rule can be used to work out the time, in seconds, it takes to download music tracks.

|  |
| --- |
| Time $=25×$ number of music tracks $+10$ |

(a) Work out the time, in seconds, it takes to download 9 music tracks.

(b) How many music tracks can be downloaded in 360 seconds?

Hint: solve this equation!

$360=25×$ tracks $+10$

4. You can use this rule to work out the cost, in pounds, of hiring a drill.

|  |
| --- |
| Cost (£) = number of days hired $×8+20$  |

Janice hires a drill for 3 days.

(a) Work out the cost.

Karim hires the drill for 6 days. Janice says, "It will cost you twice as much as it cost me."

(b) Is Janice right? You must show how you got your answer.

5. Kimona is going to cook some meat. She uses this rule to work out the cooking time in minutes.

|  |
| --- |
| Cooking time in minutes $=$ weight of meat in kg $×40+15$ |

Kimona wants to finish cooking the meat at 1 pm. The weight of the meat is 1.5 kg. Work out the latest time Kimona can start to cook the meat.

Hint: work out how long the meat will take, then work backwards

6. Tracy uses this rule to work out the cost, in pounds, of printing invitations.

|  |
| --- |
| Cost (£) = number of invitations $×1.25+4$ |

(a) Work out the cost of printing 20 invitations.

Martin uses the same rule to work out the cost of printing invitations. The cost is £47.75

(b) Work out how many invitations Martin had printed.