- **10** Simplify.
 - (a) 3y + 6x y + 5x

(a)[2]

(b) 5a # 6b



- 15 Compost is used to grow plants. Ivan has a sack containing 50 litres of compost. He uses this compost to fill pots for his plants.
 - (a) Ivan fills six large pots each holding 7.5 litres.

Work out how much compost is left in the sack.



(b)[3]

(c) Work out how much compost will then be left in the sack.

(e) Find the percentage of the 20 pupils who scored less than 30 marks in **both** Science and Mathematics.

(e) % [3]

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24 Charlie invests £1200 at a rate of 5% per year compound interest.

Show that the total amount of interest Charlie will have received after 2 years is £123. [4]



25 A machine makes bolts that should be 30.0 mm long, correct to 1 decimal place.

Jane checks the accuracy of the machine by taking a random sample of 10 of the bolts. Here are the lengths, in mm correct to 1 decimal place, of the bolts in Jane's

sample. 29.5 29.1 30.0 30.0 30.2 30.0 30.0 30.0 30.5 30.0 The machine makes

2000 of these bolts that day. Jane says

6 of the 10 bolts in the sample are of the correct length. That is 60%. Therefore, 1200 of the 2000 bolts will be of the correct length because that is 60%.

Give a reason why Jane's claim may be unreliable.

.....[1]

OCR (Oxford Cambridge and RSA) is a leading UK awarding body, providing a wide range of gualifications to meet the needs of candidates of all ages and abilities. OCR gualifications include AS/A Levels, Diplomas, GCSEs, Cambridge Nationals, Cambridge Technicals, Functional Skills, Key Skills, Entry Level qualifications, NVQs and vocational qualifications in areas such as IT, business, languages, teaching/training, administration and secretarial skills.

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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

- 7. Award No Response (NR) if:
 - there is nothing written in the answer space

Award Zero '0' if:

• anything is written in the answer space and is not worthy of credit (this includes text and symbols).

Team Leaders must confirm the correct use of the NR button with the correct live marking commences and should check this when reviewing scripts.

8. The RM Assessor **comments box** is used by an Principal Exampler or your Team Leader to explain the marking of the practice responses. Please refer to these comments (M) an checking your practice exponses. **Do not use the comments box for any other reason.**

you have any purstions or comments for your Team Leader, use the RM Assessor messaging system.

- 9. Assistant Examiners should send a brief report on the performance of candidates to their Team Leader (Supervisor) by the end of the marking period. Please follow the direction of your Team Leader about which questions you should report on and how to submit your report. Your report should contain notes on particular strengths displayed as well as common errors or weaknesses.
- 10. Annotations available in RM Assessor. These **must** be used whenever appropriate during your marking.

Annotation	Meaning
	Correct
×	Incorrect
BOD	Benefit of doubt
FT	Follow through
ISW	Ignore subsequent working (after correct answer obtained), provided method has been completed
MO	Method mark awarded 0
M1	Method mark awarded 1

J560/02

Mark Scheme

- Unless the question asks for an answer to a specific degree of accuracy, always mark at the greatest number of significant figures even if 21. this is rounded or truncated on the answer line. For example, an answer in the mark scheme is 15.75, which is seen in the working. The candidate then rounds or truncates this to 15.8, 15 or 16 on the answer line. Allow full marks for the 15.75.
- Ranges of answers given in the mark scheme are always inclusive. 22.
- 23. For methods not provided for in the mark scheme give as far as possible quivalent marks for equivalent work. If in doubt, consult your Team Leader.
 24. If in any case the mark scheme operates his Considerable unfairness consult your Team Leader

APPENDIX 1

Question 16(b)

We want the candidate to say WHY they are certain of the figure being at least £900.

If <u>TOTAL</u> is used then this MUST be £920. IF <u>rounded figures are used</u> then **all** four must be rounded down correctly (20,30,40,4)

	Response	Mark
1	It is an Underestimate	1
2	All Values were rounded down	1
3	This is correct because at minimum site we make 920 ('mminimum' implies rounding and is correct)	1
4	The values are rounded now meaning she earnt more than this	1
5	(40 x 20) + (40 3() already equal over 190	1
6	Dhe oderestimation in 0/42 £900	1
7	If you round the earnings you get over £900 (this is true for rounding both up and down)	1BOD
8	Because in my working not adding the minutes, it's still over £900 as it's £928.80 (<i>incorrect</i>)	0
9	Because I estimated it meaning she'd probably got more (probably does not mean certain)	0
10	As it has gone over £900 (not describing rounding or underestimate)	0
11	This is correct because she will make 920 (the candidate is not telling us WHY they are certain)	0
12	Because £20.15x40=£806 and £30.23 x4=120.92 + them = 926.92 not including the minimum (All rounded values not used)	0
13	If you added everything without a fraction it adds up to almost £900 (incorrect)	0
14	Because it works out that all of her work will add to over 900 (no reference to underestimate)	0
15	Because it's over 900 (not enough, need to say WHY it is certainly over £900)	0
16	The estimation is over £900 (not enough, need to say WHY estimation is certainly over £900)	0
17	Because I rounded down (not enough- needs to be e.g. rounded all numbers down)	0