Edexcel Key Skills
Chief Examiner's Report
Application of Number Level 3 November 2008

General Comments

The paper was considered to be a reasonable test of Level 3 skills and of a similar standard to previous papers. The opening questions were accessible and questions increased in complexity progressively through the paper. The pass mark on this paper was slightly higher than previously and the proportion of candidates obtaining a pass mark was similar to previous series. Candidates in some centres were clearly well prepared for the types of question that are commonly seen at this level. In other centres, candidates made errors in using the information given and in selecting and applying methods, showing that they may not have been ready for the test.

The questions answered most successfully in this paper were those involving using a formula and calculations using proportion. Questions on finding the mean from a grouped frequency table, using scale drawings, compounded percentages and interpreting charts were often handled well by stronger candidates, but others showed weaknesses in these areas. The weakest responses were seen on questions involving right-angled triangles and algebra.

Comments on Particular Aspects of the Question Paper

The first question dealt with gold jewellery, and most candidates gained some marks on it. Most were successful in finding a simple percentage of an amount, and an approximate fraction. In a part question about the value of the gold in a ring, correct choice of method to use the ratio and convert between different units was seen, but some candidates lost a mark through premature approximation.

A question about plastic shopping bags was well handled by many candidates. Few had any problem calculating the average number of carrier bags used per week. The correct weight of plastic packaging waste from carrier bags was often seen correct, but relatively few candidates were able to use this value to give a ratio in a simple form. The compound percentage question was often identified and a correct solution given, although in some cases, use of a lengthy and repetitive method gave rise to errors.

In a question about an offer of free fuel to buyers of a car, stronger candidates were able to use the information given in a multi-stage calculation to give a correct answer. Common errors included incorrect methods for converting from gallons to litres, and confusion between pounds and pence. Correct use of a formula was often seen to find the volume of a tank of fuel.

A question about a ramp was poorly answered, with relatively few candidates able to select and use a trigonometrical formula to find the angle of elevation or the length of the ramp. A part question about the area of a picnic site using dimensions from a scale drawing was handled more successfully, although some incorrect use of the scaled dimensions was seen, with candidates finding the area on the scale plan first, then attempting to scale up instead of scaling up the dimensions first.

A question about a flight to Australia proved demanding, and was frequently only partially attempted. Very few correct answers were seen to a question about the total flying time of a journey, with a particular difficulty being the difference in local time between the departure and arrival points. Similarly, very few candidates were able to use given formulae about the cost of air freight from two different companies to find the weight for which the costs were equal. These formulae were often used correctly to find the lower cost for a given weight.

In the extended answer question about personal debt, some candidates gained marks by drawing a histogram, but few completely correct graphs were seen. Common errors included omission of a title or of axis labels with correct units. Many candidates omitted to use continuous linear scales, and very few plotted frequency densities correctly. Stronger candidates were able to find the correct mean from data in a grouped frequency table, but examples of incorrect methods were seen, including using the sum of the midpoints, or dividing by the number of intervals instead of the sum of the frequencies. Part questions involving interpreting and explaining results were not well answered overall. Interpretations of the histogram tended to focus on one interval rather than the distribution. Some explanations for the choice of mean or median to represent the data in a survey were valid, but others gave irrelevant reasons.

Recommendations to Centres

Centres must ensure that candidates:

- practise solving multi-stage problems
- solve problems involving right-angled triangles
- solve problems by using and rearranging algebraic formulae
- solve problems involving compound percentages using efficient methods
- understand frequency density and how to calculate and use it
- practise interpreting results of calculations and explaining results clearly
- follow the conventions used for graphical presentations, in particular titles, appropriate labelling and units, and use suitable linear scales where necessary.

Chief Examiner