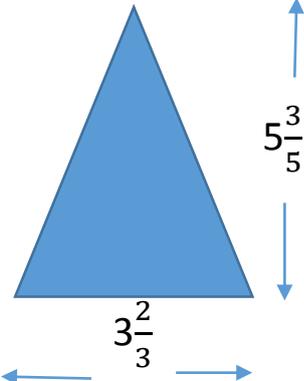


National 5 – Homework 1 – Fractions and Percentages

(question 1 and 8 must be done without a calculator)

1. Calculate (a) $\frac{1}{3} + \frac{2}{5}$ (b) $\frac{5}{6} - \frac{1}{4}$ (c) $\frac{2}{3} \times \frac{9}{14}$ (d) $\frac{4}{5} \div \frac{12}{25}$ (e) $1\frac{2}{3} + 2\frac{1}{5}$ (f) $1\frac{2}{3} \div 2\frac{1}{4}$
2. A family buy a house for £162000 and then sell the house 8 months later for £169290. What is their percentage profit based on the original price ?
3. A car tyre has its price **increased** by 8%. The new price is £23.22. What was the **original** price of the tyre ?
4. A bank offers an annual interest rate of 4 %. If £34 000 is invested in the bank initially, what will be the value of the investment after 6 years ?
5. The value of an antique appreciates in value from £160 to £200 in one year. If this annual percentage rate of appreciation continues for **another** 7 years, what will be the overall increase in value of the antique ? (answer to the nearest penny)
6. A dress has its price reduced by 5%. The new sale price of the dress is £72.20. What was the original price of the dress before the sale ?
7. A kitchen has a cash price of £4500. It can be purchased on Hire Purchase using a deposit of 5% plus equal monthly instalments over a 5 year period. The overall Hire Purchase cost is 40% more than the cash price. What is the value of each monthly instalment ?
8. Calculate (a) $\frac{1}{3}$ of $\frac{2}{3} \times 2\frac{1}{5}$ (b) $2\frac{2}{3} + 1\frac{2}{3} \div 3\frac{1}{5}$ (c) $2\frac{1}{4} \times (\frac{1}{3} + \frac{2}{5})$ (remember bomdas)

9.



Find the exact **area** of this triangle.
(give your answer as a mixed fraction)
Dimensions are in cm

10. $\frac{1}{4}$ of a class walk to school. $\frac{2}{3}$ of the **remaining** pupils go by bus. The remainder of the pupils go by car. What fraction of the pupils go by car ?

