Problem Solving & Word Problems: Hard Practice Paper 7

Q1. The two-way table shows how the pupils in two year groups travel to school. What percentage of all these pupils cycle?

Year	Walk	Bus	Cycle	Total
Year 5	24	18	8	50
Year 6	30	24	16	70
Total	54	42	24	120

A. 25% *B.* 24% *C.* 16% *D.* 12% *E.* 20%

Q2. The table shows three sizes of the same washing powder. Which box is the best value for money?

Box	Mass	Price
Small	750 g	£4.50
Medium	1.2 kg	£6.60
Large	2 kg	£11.60

A. The large box

B. The small box

C. The medium box

D. The small and large boxes are equally good

E. They are all the same value

Q3. Four coffees and three teas cost £14.50. Two coffees and three teas cost £9.50. What is the cost of one coffee?

A. £2.00 *B.* £2.50 *C.* £3.00 *D.* £1.50 *E.* £2.25

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Q4. A job takes 5 workers 12 days. After 4 days, 3 more workers join them. How many more days does the job then take?

A. 8 *B.* 6 *C.* 4 *D.* 5 *E.* 7

Q5. A town has 8,000 people. Its population rises by 10% in the first year and by another 10% in the second year. What is the population after the two years?

A. 9,600 *B.* 9,680 *C.* 9,700 *D.* 8,800 *E.* 10,000

Q6. Amy has 3 skirts, 4 tops and 2 pairs of shoes. If she buys one more top, how many extra outfits of one skirt, one top and one pair of shoes can she make?

A. 6 *B.* 24 *C.* 30 *D.* 3 *E.* 12

Q7. Taxi A charges £3 plus £1.50 for each kilometre. Taxi B charges £6 plus £1 for each kilometre. For what distance do the two taxis charge the same?

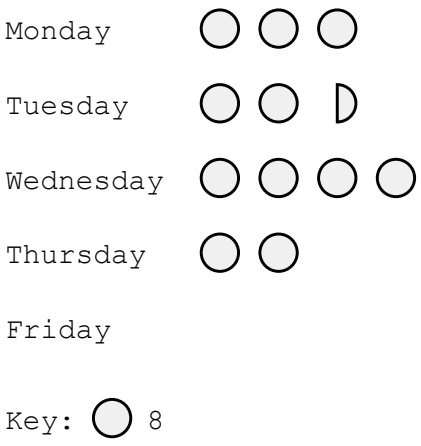
A. 9 km *B.* 3 km *C.* 6 km *D.* 4 km *E.* 12 km

Q8. The mean of eight numbers is 15. Two of the numbers, 9 and 11, are replaced by 21 and 23. What is the new mean?

A. 18 *B.* 16 *C.* 17 *D.* 20 *E.* 15

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Q9. The pictogram shows how many books were borrowed on four days. Altogether 100 books were borrowed from Monday to Friday. How many symbols should Friday's row have?



A. 0.5 *B.* 2 *C.* 1.5 *D.* 1 *E.* 4

Q10. Three fifths of the pupils in a class are girls. When 4 more boys join, there are equal numbers of boys and girls. How many pupils were in the class at first?

A. 15 *B.* 25 *C.* 30 *D.* 20 *E.* 40

Q11. A shop buys 40 shirts for £480 altogether and sells them at £18 each, but 5 of them are never sold. What profit does the shop make?

A. £120 *B.* £240 *C.* £150 *D.* £200 *E.* £270

Q12. A flight leaves London at 14:20 and takes 8 hours 45 minutes. The city it lands in is 3 hours ahead of London. What is the local time when it lands?

A. 05:05 *B.* 23:05 *C.* 20:05 *D.* 01:05 *E.* 02:05

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Q13. The table shows the lowest temperature recorded in five cities. What is the difference between the highest and the lowest of them?

City	Temperature
Ayton	−8°C
Bury	3°C
Crake	−2°C
Dell	7°C
Esk	−5°C

A. 15°C *B.* 12°C *C.* 10°C *D.* 5°C *E.* 13°C

Q14. The sum of five consecutive whole numbers is 105. What is the largest of the five?

A. 21 *B.* 23 *C.* 25 *D.* 19 *E.* 22

Q15. A rectangular field has a perimeter of 96 m, and its length is twice its width. What is its area?

A. 288 m² *B.* 256 m² *C.* 384 m² *D.* 1,024 m² *E.* 512 m²

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