

MULTIPLICATIVE REASONING

Answer all of these questions. Remember to show your working out in all questions.

MAIN QUESTIONS

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| 1. If $12 \times 7 = 84$, what is 1.2×7 ? | 2. If $15 \times 6 = 90$, what is 1.5×6 ? |
| 3. If $24 \times 5 = 120$, what is 2.4×5 ? | 4. If $18 \times 4 = 72$, what is 1.8×4 ? |
| 5. If $30 \times 3 = 90$, what is 3×0.3 ? | 6. If $45 \times 2 = 90$, what is 4.5×2 ? |
| 7. If $60 \times 1.5 = 90$, what is 6×1.5 ? | 8. If $75 \times 1.2 = 90$, what is 7.5×1.2 ? |
| 9. If $90 \times 1 = 90$, what is 9×1 ? | 10. If $105 \times 0.8 = 84$, what is 10.5×0.8 ? |
| 11. If $120 \times 0.7 = 84$, what is 12×0.7 ? | 12. If $135 \times 0.6 = 81$, what is 13.5×0.6 ? |
| 13. If $150 \times 0.5 = 75$, what is 15×0.5 ? | 14. If $165 \times 0.4 = 66$, what is 16.5×0.4 ? |
| 15. If $180 \times 0.3 = 54$, what is 18×0.3 ? | 16. If $195 \times 0.2 = 39$, what is 19.5×0.2 ? |
| 17. If $210 \times 0.1 = 21$, what is 21×0.1 ? | 18. If $225 \times 0.05 = 11.25$, what is 22.5×0.05 ? |
| 19. If $240 \times 0.04 = 9.6$, what is 24×0.04 ? | 20. If $255 \times 0.03 = 7.65$, what is 25.5×0.03 ? |
| 21. If $270 \times 0.02 = 5.4$, what is 27×0.02 ? | 22. If $285 \times 0.01 = 2.85$, what is 28.5×0.01 ? |

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| 23. | If $300 \times 0.005 = 1.5$, what is 30×0.005 ? | 24. | If $315 \times 0.004 = 1.26$, what is 31.5×0.004 ? |
| 25. | If $330 \times 0.003 = 0.99$, what is 33×0.003 ? | 26. | If $345 \times 0.002 = 0.69$, what is 34.5×0.002 ? |
| 27. | If $360 \times 0.001 = 0.36$, what is 36×0.001 ? | 28. | If $375 \times 0.0005 = 0.1875$, what is 37.5×0.0005 ? |
| 29. | If $390 \times 0.0004 = 0.156$, what is 39×0.0004 ? | 30. | If $405 \times 0.0003 = 0.1215$, what is 40.5×0.0003 ? |
| 31. | If $420 \times 0.0002 = 0.084$, what is 42×0.0002 ? | 32. | If $435 \times 0.0001 = 0.0435$, what is 43.5×0.0001 ? |
| 33. | If $450 \times 0.00005 = 0.0225$, what is 45×0.00005 ? | 34. | If $465 \times 0.00004 = 0.0186$, what is 46.5×0.00004 ? |
| 35. | If $480 \times 0.00003 = 0.0144$, what is 48×0.00003 ? | 36. | If $495 \times 0.00002 = 0.0099$, what is 49.5×0.00002 ? |
| 37. | If $510 \times 0.00001 = 0.0051$, what is 51×0.00001 ? | 38. | If $525 \times 0.000005 = 0.002625$, what is 52.5×0.000005 ? |
| 39. | If $540 \times 0.000004 = 0.00216$, what is 54×0.000004 ? | 40. | If $555 \times 0.000003 = 0.001665$, what is 55.5×0.000003 ? |
| 41. | If $570 \times 0.000002 = 0.00114$, what is 57×0.000002 ? | 42. | If $585 \times 0.000001 = 0.000585$, what is 58.5×0.000001 ? |

MASTER QUESTIONS



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- M1.** A train travels 360 miles in 6 hours. How far will it travel in 2.5 hours at the same speed?
- M2.** A car uses 12 litres of petrol to travel 144 miles. How much petrol will it need to travel 60 miles?
- M3.** A factory produces 480 widgets in 8 hours. How many widgets will it produce in 3 hours at the same rate?

- M4.** A shop sells 5 pens for £3.50. How much will 12 pens cost at the same rate?
- M5.** A recipe for 4 people requires 300g of flour. How much flour is needed for 7 people?
- M6.** A machine packs 600 boxes in 5 hours. How many boxes will it pack in 2 hours at the same rate?
- M7.** A farmer harvests 750kg of potatoes from 3 fields. How many kilograms will he harvest from 5 fields at the same yield?
- M8.** A printer can print 120 pages in 4 minutes. How many pages can it print in 7 minutes at the same speed?
- M9.** A builder uses 200 bricks to build a wall 5 metres long. How many bricks will he need to build a wall 8 metres long at the same rate?
- M10.** A cyclist travels 45 miles in 3 hours. How far will he travel in 5 hours at the same speed?