

UNIT 7 Ratio and Proportion

Mental Tests

M 7.1 Standard Route *(no calculator)*

1. Simplify the ratio 3 : 6. (1 : 2)
 2. Simplify the ratio 4 : 20. (1 : 5)
 3. Simplify the ratio 5 : 40. (1 : 8)
 4. Simplify the ratio 6 : 8. (3 : 4)
 5. If 10 bars of chocolate cost £3, how much does 1 bar cost? (30p)
 6. If 2 tickets for a swimming session cost £5, how much do 6 tickets cost? (£15)
 7. If 5 packets of sweets cost £1, how much do 2 packets cost? (40p)
 8. If £1 is worth 3 German Marks, convert:
 - (a) £20 to German Marks, (60 DM)
 - (b) £2.50 to German Marks, (7.5 DM)
 - (c) 45 German Marks to pounds. (£15)
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M 7.2 Academic Route *(no calculator)*

1. Simplify the ratio 4 : 20. (1 : 5)
 2. Simplify the ratio 6 : 15. (2 : 5)
 3. Simplify the ratio 14 : 24. (7 : 12)
 4. If 8 bars of chocolate cost £2.40, how much do 3 bars cost? (90p)
 5. If 5 tickets for a swimming session cost £6, how much do 3 tickets cost? (£3.60)
 6. Share £12 in the ratio 1 : 2. (£4, £8)
 7. Share £18 in the ratio 1 : 2 : 3. (£3, £6, £9)
 8. If £1 is worth 3 German Marks, convert:
 - (a) £22 to German Marks, (66 DM)
 - (b) £7.50 to German Marks, (22.5 DM)
 - (c) 57 German Marks to pounds. (£19)
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M 7.3 Express Route *(no calculator)*

1. Simplify the ratio 6 : 42. (1 : 7)
 2. Simplify the ratio 20 : 45. (4 : 9)
 3. Simplify the ratio 63 : 81. (7 : 9)
 4. If 7 packets of sweets cost £2.80, how much do 5 packets cost?. (£2)
 5. If you travel 100 miles at 60 mph, how long does your journey take? (1 hr 40 mins)
 6. Share £49 in the ratio 1 : 2 : 4. (£7, £14, £28)
 7. Share £56 in the ratio 5 : 2 : 7. (£20, £8, £28)
 8. If £1 is worth 11 Danish Krone, convert:
 - (a) £3.50 to Danish Krone, (38.5 Dkr)
 - (b) 275 Danish Krone to pounds, (£25)
 - (c) 209 Danish Krone to pounds. (£19)
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