

Think. Solve.
Explore your world.





What's inside this booklet?



A world map composed of small orange dots on a dark blue background. The word "Americas" is written in orange on the left side. Various mathematical symbols are placed around the map: green plus signs (+) over North and South America, yellow 'X' marks over Europe and Africa, and red equals signs (=) over Asia and Australia.

Americas



Question 1 2.5% of the world's water is fresh water. The rest is mostly salt water. $\frac{1}{5}$ of the world's fresh water is in the Great Lakes of Canada and the United States. What percent of the world's total water is in the Great Lakes?



Question 2 Americans take more flights than anyone else, with 840 million trips per year! There are 325 million people in the United States. Is the annual average number of flights per person >3 or <3 ?



Question 3 Brazil is the world's largest producer of coffee beans at 10,000,000 kg per day! If 1 kg of beans makes 100 cups of coffee, how many cups does Brazil's coffee bean production equal to per day?



Question 4 Former United States President Barack Obama has 100 million (that's 0.1 billion) Twitter followers—the world's highest! What fraction of the world's 7.5 billion people does this represent?



Question 5 The Vatican, which is surrounded by Italy, is the world's smallest country at 0.44 km^2 . How would you describe its area in terms of number of tenths and hundredths of 1 km^2 ?



Question 6 In 2015 and 2016, the number of people seeking protection (asylum) in Europe hit its peak at 1.2 million each year—double the number in the year before and year after. What's the total number from 2014-2018?



Question 7 The three countries with the highest annual income per person are in Europe: Luxembourg at $\text{€}100,000$, Liechtenstein at $\text{€}150,000$ and Monaco at $\text{€}155,000$. What's the average of these three figures?



Question 8 The Berlin Wall divided East and West Germany for 28 years (1961 to 1989). On average, 30 people per month tried to cross from East to West. How many people tried to cross over this 28 year period?



Question 9 China and Russia border 14 countries each! Mongolia and Kazakhstan border China and Russia; China and Russia border each other. Excluding Russia, what fraction of China's neighbors don't border Russia?



Question 10 Mongolia is the world's least crowded country, with two times the population of capital Ulaanbaatar (y), spread over the country's area (z). How would you express Mongolia's density (x) as a formula?



Question 11 Australia was the first country to print "paper" currency on polymer that feels like plastic. If paper bills cost \$0.10 to print, and polymer bills \$0.25, how many times longer must polymer bills last to break even?



Question 12 China's 25-person Politburo has great power, but the 3,000-member National People's Congress (NPC), the world's largest parliament, votes on laws. What's the simplified ratio of NPC to Politburo members?



Question 13 Everyone agrees Everest is the world's tallest mountain, but not about its height! Different measurements include: 8,848, 8,872, 8,846, 8,850, 8,844 and 8,847 m. What's the median of these measurements?



Question 14 India's population—1.3 billion—is the world's second highest and South Asia's highest. It's double the total of all of its neighbors in South Asia! What is India's population as a fraction of the total for South Asia?



Question 15 Bangladesh's clothes-making industry, one of the world's largest, employs 3,600,000 people in 4,000 factories! What's the average number of employees per factory?



Question 16 In 2014, the United States military left Kyrgyzstan's Manas air base, which it used for 12 years to make 3,500 cargo flights and 2,750 refueling flights per year. How many flights took off over the 12 years?



Question 17 Lesotho, with a land area of 0.03 million km², is surrounded completely by South Africa, with a land area of 1.2 million km². How many "Lesothos" could fit into one South Africa?



Question 18 Turkey hosts more refugees—3.5 million—than any other country. Most fled Syria. Turkey's population (refugees and non-refugees) is 84 million. How many non-refugees are there for every refugee?



Question 19 Average annual income in Ethiopia is one the world's lowest at \$800 but grows at the fastest rate of 10% above the prior year. Will it take greater than, fewer than or equal to 10 years to double?



Question 20 After 20 years opposing South Africa's regime and 26 years in prison on political charges, Nelson Mandela became President four years later for five years. What's the ratio inside to outside prison over this time?



Question 21 Africa has 54 countries, Asia $\frac{8}{100}$ of Africa's number, and the world's other continents nine fewer countries than Africa and Asia combined. What's the total number of countries across the world?



Question 22 Out of the 300 billion e-mails sent and received each day around the world, $\frac{29}{100}$ are through an Apple interface and $\frac{27}{100}$ are through a Gmail interface. How many e-mails per day use other systems?



Question 23 Three countries provide more products or services to others (exports) than any other country: United States at 13.2% of the world's total, China 9.7% and Germany 6.7%. Do these total at least $\frac{1}{4}$ of global exports?



Question 24 $\frac{19}{20}$ of United Nations peacekeepers are in five countries: Central African Republic, Sudan, South Sudan, Mali and the Congo, totaling 9,500 soldiers. How many soldiers are peacekeepers elsewhere?

Answers & Solutions

Americas

Question 1 **0.5%**
Solution $2.5\% \div 5 = 0.5\%$

Question 2 **<3**
Solution $325 \times 3 = 975$ million; $840 < 975$

Question 3 **1,000,000,000 cups**
Solution $10,000,000 \times 100 = 1,000,000,000$

Question 4 **$\frac{1}{75}$**
Solution $0.1 \div 7.5 = \frac{1}{75}$

Europe

Question 5 **Four tenths and four hundredths**
Solution n/a

Question 6 **3.6 million people**
Solution $1.2 + 1.2 + (1.2 \div 2) + (1.2 \div 2) = 1.2 + 1.2 + 0.6 + 0.6 = 3.6$

Question 7 **€135,000**
Solution $(100,000 + 150,000 + 155,000) \div 3 = 405,000 \div 3 = 135,000$

Question 8 **10,080 people**
Solution $(30 \times 12) \times 28 = 360 \times 28 = 10,080$

Far East & Oceania

Question 9 **$\frac{11}{13}$**
Solution $(14 - 1 - 2) / 13 = \frac{11}{13}$ $(14 - 1 - 2) / 13 = \frac{11}{13}$

Question 10 **$x = 2y \div z$**
Solution n/a

Question 11 **2.5**
Solution $0.25 \div 0.10 = 2.5$

Question 12 **120:1**
Solution $3,000:25 = 120:1$

= + Answers & Solutions + x = + x = + x = + x = + x = + x = + x

Central & South Asia

Question 13 **8,847.5 m**
Solution $(8,847 + 8,848) \div 2 = 8,847.5$

Question 14 $\frac{2}{3}$
Solution $1.3 / (1.3 + (1.3 \div 2)) = 1.3 / (1.3 + 0.65) = 1.3 / 1.95 = \frac{2}{3}$

Question 15 **900 employees**
Solution $3,600,000 \div 4,000 = 3,600 \div 4 = 900$

Question 16 **75,000 flights**
Solution $(3,500 + 2,750) \times 12 = 6,250 \times 12 = 75,000$

Africa & Middle East

Question 17 **40 Lesothos**
Solution $1.2 \div 0.03 = 40$

Question 18 **23 non-refugees**
Solution $(84 - 3.5) \div 3.5 = 80.5 \div 3.5 = 23$

Question 19 **Fewer than 10 years**
Solution Each year, grows 10% on rising base, so doubles in under 10 years

Question 20 **26:29**
Solution $26 : (20 + 4 + 5) = 26:29$

International

Question 21 **195 countries**
Solution $54 + (54 \times \frac{8}{9}) = 54 + 48 = 102; 102 - 9 = 93; 102 + 93 = 195$

Question 22 **132 billion e-mails**
Solution $300 - (300 \times \frac{29}{100}) - (300 \times \frac{27}{100}) = 300 - 87 - 81 = 132$

Question 23. **Yes**
Solution $13.2\% + 9.7\% + 6.7\% = 29.6\%; \frac{1}{4} = 25\%; 29.6\% > 25\%$

Question 24 **500 soldiers**
Solution $\frac{1}{20} = 9,500 \div 19 = 500$

Scoring Tracker



Grand Total



Geography



Society

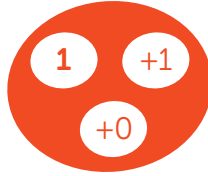


Economy

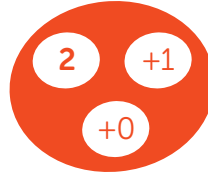


Politics

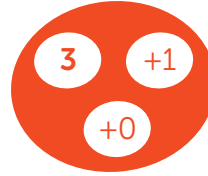
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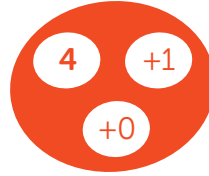
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2 +1
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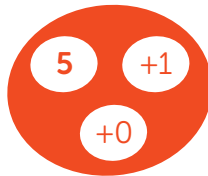


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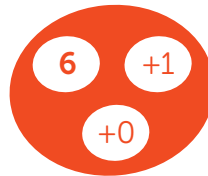


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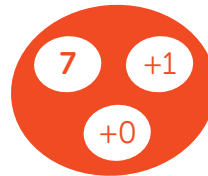
Europe



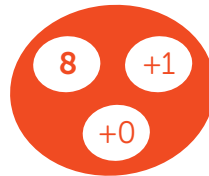
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+0



6 +1
+0

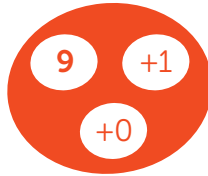


7 +1
+0

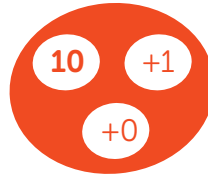


8 +1
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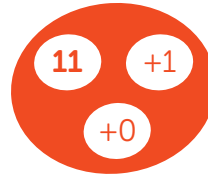
Far East & Oceania



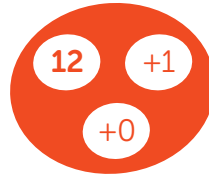
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10 +1
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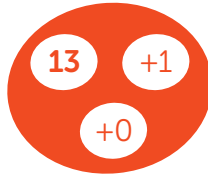


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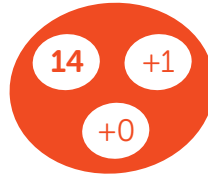


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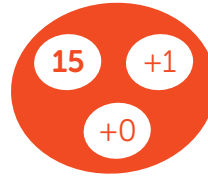
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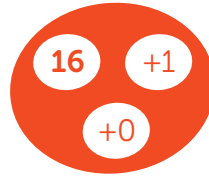
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14 +1
+0

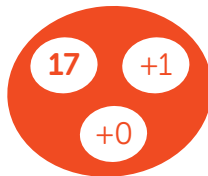


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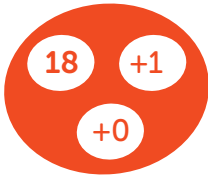


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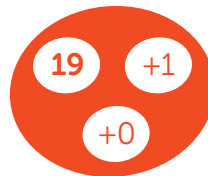
Africa & Middle East



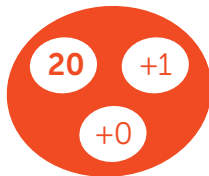
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18 +1
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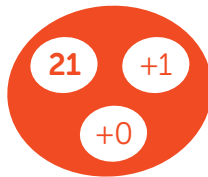


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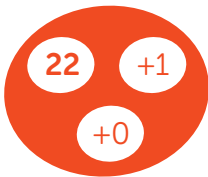


20 +1
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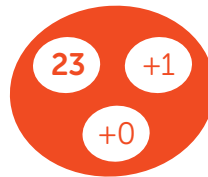
International



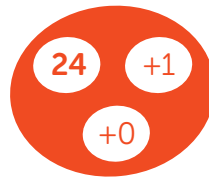
21 +1
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22 +1
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23 +1
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24 +1
+0



The sources for figures are broadly-accepted public sources. Sometimes, the figures are rounded in order to facilitate age-appropriate calculation difficulty.

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