

Questions and answers used during the Focus task

1. If 2468 is subtracted from 8642, what is left?
 - a. 6174
 - b. 6176
 - c. 6214
 - d. 6274
2. What is the next number in the sequence 7, 18, 62, 238?
 - a. 812
 - b. 872
 - c. 942
 - d. 972
3. What results when the cube of 4 is added to half of 8?
 - a. 6
 - b. 20
 - c. 68
 - d. 260
4. If a winning candidate secured 55% of the 12000 votes cast, how many voted for him?
 - a. 6000
 - b. 6400
 - c. 6600
 - d. 7200
5. What is 884 divided by 26?
 - a. 28
 - b. 32
 - c. 34
 - d. 38
6. What is the only prime number between 98 and 102?
 - a. 99
 - b. 100
 - c. 101
 - d. 102
7. How long will it take a car travelling at 45mph to cover 150 miles?
 - a. 2 hours 50 minutes
 - b. 3 hours 10 minutes
 - c. 3 hours 20 minutes
 - d. 3 hours 30 minutes
8. 220 books were sold at a price of £11 each. How much money was taken?
 - a. 2140
 - b. 2220
 - c. 2222
 - d. 2420
9. In a class of 32 children, 12 are boys. What percentage does this represent?
 - a. 30
 - b. 33
 - c. 37.5
 - d. 40
10. In a bag of 28 sweets, 7 of them were lemon flavour. What percentage were not lemon?
 - a. 60

- b. 66
 - c. 70
 - d. 75
11. Which is the smallest out of two thirds, 60%, 0.65 or seven elevenths?
- a. $\frac{2}{3}$
 - b. 60%
 - c. 0.65
 - d. $\frac{7}{11}$
12. What is the next number in the series 4, 17, 160, 1733?
- a. 18,760
 - b. 19,036
 - c. 21,364
 - d. 22,030
13. What is 232 multiplied by 11?
- a. 2,332
 - b. 2,442
 - c. 2,552
 - d. 2,662
14. If 27 items are bought at a price of €2.45 each, what is the total bill?
- a. 66
 - b. 69
 - c. 70
 - d. 72
15. What is the cube root of 1,331?
- a. 9
 - b. 11
 - c. 13
 - d. 17
16. What is the area of a triangle whose height is 35cm and whose base is 32cm?
- a. 280 sq cm
 - b. 360 sq cm
 - c. 560 sq cm
 - d. 1120 sq cm
17. How many seconds are there in 28 minutes?
- a. 1,680
 - b. 1,684
 - c. 1,690
 - d. 1,696
18. What is 3,844 divided by 16?
- a. 211
 - b. 240
 - c. 280
 - d. 291
19. If a plane covers 375km in 45 minutes, how far will it travel in 6 hours?
- a. 2,450km
 - b. 2,750km
 - c. 3,000km
 - d. 3,200km
20. If £350 interest was received at a rate of 2.8%, how much was invested?

- a. £7,500
 - b. £11,000
 - c. £12,500
 - d. £14,500
21. What is 27,764 subtracted from 73,351?
- a. 44,587
 - b. 45,587
 - c. 45,877
 - d. 45,887
22. What is the square root of 784?
- a. 22
 - b. 24
 - c. 26
 - d. 28
23. What results when the cube of 6 is added to the square root of 361?
- a. 53
 - b. 55
 - c. 233
 - d. 235
24. What is the cost of 18kg of plums at a price of 23.5 pence per kg?
- a. 4.13
 - b. 4.17
 - c. 4.23
 - d. 4.27
25. What is the next number in the series 2, 3, 8, 63?
- a. 125
 - b. 248
 - c. 2848
 - d. 3968
26. What is the sum of the numbers between 31 and 36 (inclusive)?
- a. 201
 - b. 202
 - c. 203
 - d. 204
27. If two sides of a right-angled triangle are 5cm and 12cm long, how long is the third side?
- a. 6cm
 - b. 9cm
 - c. 13cm
 - d. 17cm
28. What is the quarts in a gallon multiplied by the acres in a square mile?
- a. 256
 - b. 384
 - c. 2560
 - d. 3840
29. What is $5^2 + 13^2 + 15^2$?
- a. 369
 - b. 399
 - c. 419
 - d. 439

30. If a baker's dozen of items costs £3.51, what does each item cost individually?
- a. 19 pence
 - b. 27 pence
 - c. 29 pence
 - d. 31 pence
31. What is the next number in the series 3, 12, 102?
- a. 304
 - b. 408
 - c. 622
 - d. 1002
32. A 3 hour conference uses 6 speakers. How much time will each one get on average?
- a. 15 minutes
 - b. 20 minutes
 - c. 30 minutes
 - d. 45 minutes
33. A car costs a dealer \$6,775 to buy and he sells it for \$10,350. What profit is made?
- a. \$3,355
 - b. \$3,575
 - c. \$3,735
 - d. \$3,755
34. How much is a 15% service charge on top of a bill of £84.40?
- a. 12.06
 - b. 12.6
 - c. 12.61
 - d. 12.66
35. When will someone born in 1978 celebrate their 53rd birthday?
- a. 2011
 - b. 2021
 - c. 2031
 - d. 2041
36. How many 250cc glasses are needed to hold 17.5 litres of water?
- a. 70
 - b. 72
 - c. 76
 - d. 80
37. How many minutes are there between mid-day on Tuesday and mid-day on Thursday?
- a. 2008
 - b. 2080
 - c. 2800
 - d. 2880
38. Starting with 48, three sixteenths of items are sold within an hour. How many are left?
- a. 31
 - b. 33
 - c. 36
 - d. 39
39. Three people bank amounts of £35.75, £42.75 and £63.55 respectively. What is the total?
- a. 132.05
 - b. 138.35
 - c. 141.55

- d. 142.05
- 40. What is the cost of 120 chocolate bars at 31 pence each?
 - a. 31.4
 - b. 37.2
 - c. 39.6
 - d. 42
- 41. An invoice must be paid exactly 30 days after 25th March - when will that be?
 - a. 20th April
 - b. 24th April
 - c. 28th April
 - d. 1st May
- 42. A CD holds 78 minutes worth of music. How many 3 minute tracks can be included?
 - a. 19
 - b. 26
 - c. 29
 - d. 31
- 43. A rugby team won 60% of its 30 games, and drew one. How many did it lose?
 - a. 9
 - b. 10
 - c. 11
 - d. 12
- 44. If steel wool costs £9 per yard, how many feet would £243 buy?
 - a. 67
 - b. 71
 - c. 76
 - d. 81
- 45. How many months of the year have less than 31 days?
 - a. 3
 - b. 4
 - c. 5
 - d. 6
- 46. What is nine squared, added to the square root of nine?
 - a. 30
 - b. 57
 - c. 84
 - d. 90
- 47. How many euros would £15 buy at an exchange rate of £1 = €1.48?
 - a. 21.4
 - b. 22.2
 - c. 23.6
 - d. 27.7
- 48. What percentage is two fifths?
 - a. 25
 - b. 35
 - c. 40
 - d. 45
- 49. What is 24,624 divided by 6?
 - a. 404
 - b. 4004

- c. 4014
 - d. 4104
50. What is 9,342 subtracted from 17831?
- a. 7699
 - b. 8039
 - c. 8399
 - d. 8489
51. What is one third of 102?
- a. 34
 - b. 35
 - c. 36
 - d. 37
52. In Physics what is resistance to change in a state of motion called?
- a. Inertia
 - b. Inflexibility
 - c. Mass
 - d. Solidarity
53. Which body causes incident light to separate by colour upon exiting?
- a. Lens
 - b. Mirror
 - c. Prism
 - d. Water
54. What is created in space upon the collapse of a neutron star?
- a. Asteroids
 - b. Black Hole
 - c. Galaxy
 - d. Solar System
55. What does "supersonic" speed exceed?
- a. The Speed of a Space Shuttle
 - b. The Speed of Concorde
 - c. The Speed of Light
 - d. The Speed of Sound
56. What name is given to the path taken by a projectile?
- a. Ballistic
 - b. Circumference
 - c. Parabola
 - d. Trajectory
57. What name is given to a device which measures atmospheric pressure?
- a. Ammeter
 - b. Barometer
 - c. Thermometer
 - d. Weather Vane
58. What in Physics is the opposite of condensation?
- a. Compression
 - b. Freezing
 - c. Meltdown
 - d. Vaporisation
59. As a general law of mechanics, what is stress directly proportional to?
- a. Density

- b. Force
 - c. Pressure
 - d. Strain
60. In Physics, what does STP stand for?
- a. Standard temperature and pressure
 - b. Standard thermal policy
 - c. Standard time and place
 - d. Standard tonnage and placement
61. At what Fahrenheit temperature does water boil?
- a. 100 degrees
 - b. 152 degrees
 - c. 212 degrees
 - d. 792 degrees
62. With which branch of Physics does the Kirchhoff Junction Rule apply?
- a. Electricity
 - b. Light
 - c. Sound
 - d. Wave Motion
63. Which electronic components have impedance?
- a. Batteries
 - b. Capacitors
 - c. Resisitors
 - d. Switches
64. In Physics, what is the angle called between a ray and the surface normal?
- a. Angle of Deflection
 - b. Angle of Incidence
 - c. Angle of Reflection
 - d. Angle of Refraction
65. What is electric potential more commonly known as?
- a. Current
 - b. Power
 - c. Voltage
 - d. Wattage
66. With what is Archimedes' Principle concerned?
- a. Air Pressure
 - b. Buoyancy
 - c. Heat Transfer
 - d. Light Refraction
67. In Physics, what are the two distinctive types of friction?
- a. Inert and Dynamic
 - b. Motive and Immotive
 - c. Permanent and Temporary
 - d. Static and Kinetic
68. What does an anemometer measure?
- a. Relative Density
 - b. Relative Humidity
 - c. Viscosity
 - d. Wind Speed
69. What temperature on the Kelvin Scale is equivalent to minus 273 Celcius?

- a. Minus 173
- b. Minus 273
- c. Plus 100
- d. Zero

70. What frequencies of sound energy exceed the human upper hearing limit?

- a. Extrasonic
- b. Supersonic
- c. Ultrasonic
- d. Uppersonic