

S2 Assessment Revision Solutions (Level 3-4)

Scientific Notation Answers:

- 1a) 7×10^4 b) 3×10^5 c) 8×10^8 d) 9×10^9 f) 3×10^{-5} g) 9×10^{-6} h) 2×10^{-7}
2a) 9.925×10^8 b) 7.08360×10^{-5} c) 5.27×10^{-3} d) 2.7017×10^4 e) 2.6377×10^{-1}
f) 9.218×10^7 g) 4.94×10^5 h) 1.74×10^9 i) 1.580×10^9 j) 2.023340×10^6
3. 5.4×10^6 flights
4. 4×10^{-4} m
5. 5.88×10^{12} miles
6. 1.794×10^7 mm OR 1.794×10^4 m
7. 2.04×10^4 mosquitos

Mixed Questions on Ratio – Answers

1. 5:8 2. 12 women 3. Alex £100, James £60 4. 3:5 5. 80 women
6. Carol £60, Dennis £20 7. 2:7 8. 40 pupils 9. Alison £350, Colin £150
10. 3:5 11. 9:6:5 12. 27000 13. Ed £40, Ted £60, Zed £100
14. Walk 500 km, Cycle 1000 km, Drive 1500km

Proportion Answers:

1. £200 2. £70 3. £150 4. £180 5. £180 6. £3.60
7. £2.25 8. £2.75 9. £2.70 10. £10.35 11. 300g 12. 120sqm
13. 270 words 14. £30 15. 240km 16. 180miles 17. 420times
18. £48 19. 48 litres 20. 420 elephants

Money Answers

- 1a. £8580 b. £8484 c. £96 – Mary earns more 2. £3643. £1200
3. a. £1200 commission b. £2000 4. £350 5a. £300 b. £1650
6. £122.50 profit

Probability

- 1a. $\frac{1}{2}$ b. $\frac{2}{6} = \frac{1}{3}$ 2a. $\frac{6}{10} = \frac{3}{5}$ b. $\frac{2}{10} = \frac{1}{5}$
3a. $\frac{2}{6} = \frac{1}{3}$ b. $\frac{3}{6} = \frac{1}{2}$ c. $\frac{2}{6} = \frac{1}{3}$
4a. $\frac{4}{16} = \frac{1}{4}$ b. $\frac{12}{16} = \frac{3}{4}$ c. $\frac{1}{16}$ d. $\frac{11}{16}$
5a. 60 b. i. $\frac{8}{60} = \frac{2}{15}$ ii. $\frac{24}{60} = \frac{2}{5}$
6a. $\frac{3}{9} = \frac{1}{3}$ b. $\frac{6}{9} = \frac{2}{3}$

Straight Line Answers

- 1a) $m=3$ (0,2) b) $m=4$ (0,-7) c) $m=5$ (0,12) d) $m=4$ (0,-9) e) $m=5$ (0,0)
f) $m=1$ (0,2) g) $m=-1$ (0,3) h) $m=-3$ (0,7)

- 2a) $y=4x+3$ b) $y=2x-4$ c) $y=5x-3$ d) $y=x+11$ e) $y=-3x+4$ f) $y=-4x$

3 $y=2x+3$ matches with line B

$y=2x-3$ matches with line C

$y=x-3$ matches with line D

$y=-x+3$ matches with line A

Similar Shapes Answers

- 1a) $a=8\text{cm}$ b) $b=2.5\text{cm}$ c) $c=10\text{cm}$ d) $d=5\text{cm}$ d) $e=8\text{cm}$ f) $f=2.8125$

- 2a) $g=12\text{cm}$ b) MISS OUT

- 3a) $j=3$ $k=7\text{cm}$ b) $m=2.25\text{cm}$ $n=18\text{cm}$ c) $q=1.2\text{cm}$ $p=8\text{cm}$

Angles in Circles

- 1 $x=90^\circ$ $y=44^\circ$ 2 $x=90^\circ$ $y=26^\circ$

3. $A=90^\circ$ $B=45^\circ$ $C=90^\circ$ $D=55^\circ$ $E=90^\circ$ $F=43^\circ$

$G=90^\circ$ $H=18^\circ$ $I=90^\circ$ $J=63^\circ$ $L=68^\circ$

4. $a=90^\circ$ $b=20^\circ$ $c=110^\circ$ $d=90^\circ$ $e=60^\circ$ $f=30^\circ$

$g=25^\circ$ $h=25^\circ$ $i=90^\circ$ $j=65^\circ$ $k=90^\circ$

$l=90^\circ$ $m=45^\circ$ $n=55^\circ$

Circumference of a circle Answers

1. 18·8 cm 2. 34·6 cm 3. 25·1 cm 4. 62·8 cm
5. 12·6 cm 6. 50·3 cm 7. 320·3 cm 8. 150·7 cm

Area of a circle answers

1. 1256·6 cm² 2. 50·3 cm² 3. 254·5 cm² 4. 153·9 cm²
5.(a) 28·3 cm² (b) 530·9 cm² (c) 1963·5 cm²

6. 78·5 cm² 7. 201·1 cm² 8. 452·4 cm²
9.(a) 12·6 cm² (b) 153·9 cm² (c) 1963·5 cm²
10. 706·9 cm²

Volume answers

1. 960000cm³ = 960litres 2. 12cm 3. 600cm³
4. a. 15707.96cm³ b. 300m³ c. 589.59m³

5. 942.48m³