Busy at Maths 6: Answers

May 5-15th

Chapter title and chapter number

3d Shapes 32

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**1.** Solid

**2.** Length, width, height

**3.** Vertex

**4.** Base

**5.** Apex

**6.** Shape of bases

**7.** Tetrahedron

**8.** Prism

**9.** Cylinder

**10.** Polyhedral

**11.** Polyhedron

**12.** Shape net

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**1.**

**(a) Cuboid:**

faces: 6

edges: 12

vertices: 8

meet: 3

**(b) tetrahedron:**

faces: 4

edges: 6

vertices: 4

meet: 3

**(c) pentagonal prism:**

faces: 7

edges: 15

vertices: 10

meet: 3

**(d) cube:**

faces: 6

edges: 12

vertices: 8

meet: 3

**(e) triangular prism:**

faces: 5

edges: 9

vertices: 6

meet: 3

**(f) hexagonal pyramid:**

faces: 7

edges: 12

vertices: 7

meet: (i) 6; (ii) 3

usy at Maths

**2.**

**(a)** cube

**(b)** hexagonal pyramid

**(c)** pentagonal prism

**(d)** cuboid

**(e)** triangular prism

**(f)** tetrahedron

**Challenge I:** No! (sides not

straight)

**Challenge II:** Cone, cylinder,

sphere,

hemisphere

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**1.**

**(a)** triangular pyramid

**(b)** 6

**(c)** 4

**(d)** triangle

**(e)** 4

**2.**

**(a)** 12

**(b)** 6

**(c)** square

**(d)** 8

**(e)** prism

**3.**

**(a)** 12

**(b)** 8

**(c)** triangle

**(d)** 6

**(e)** square pyramids

**Challenge:**

(a) (i) 12 (ii) 30 (iii) 20

(b) (i) 20 (ii) 30 (iii) 12

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**1.**

**(a)** (i)

**(b)** (iii)

**(c)** (i)

**(d)** (ii)

**2.**

**(a)** (i) Top

(ii) side

(iii) front

**(b)** (i) front

(ii) side

(iii) top

**(c)** (i) top

(ii) side

(iii) front

**(d)** (i) side

(ii) top

(iii) front

**3.**

**(a)** top

**(b)** front

**(c)** side

**(d)** top

Rules and Properties 29

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**1.** 13, 21, 34, 55, 89

**2.**

**(a)** 16, 26, 42

**(b)** 32, 52, 84

**(c)** 56, 91, 147

**(d)** 72, 117, 189

**(e)** 96, 156, 252

**(f)** 120, 195, 315

**3.**

**(a)** 1, 1, 2, 3, 5, 8, 13

**(b)** Yes

**(c)** No answers

**(d)** No answers

**4.**

**(a)** 15, 21, 28, 36, 45, 55, 66,

78,

**(b)** 91

**(c)** 210

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**1.**

**(a)** Yes

**(b)** No

**(c)** Yes

**(d)** No

**(e)** Yes

**(f)** No

**(g)** Yes

**(h)** Yes

**(i** ) No

**(j)** Yes

**2.** No answers

**3.** 36, 49, 64

**4.** 13, 17, 19

**5.**

**(a)** 18, 21, 24

**(b)** 24, 28, 32

**(c)** 30, 35, 40

**(d)** 36, 42, 48

**(e)** 42, 49, 56

**(f)** 48, 56, 64

**(g)** 54, 63, 72

**(h)** 60, 70, 80

**(i)** 66, 77, 88

**(j)** 72, 84, 96

**6.**

**(a)** 43, 40, 37

**(b)** 34, 30, 26

**(c)** 45, 39, 33

**(d)** 53, 46, 39

**(e)** 57, 48, 39

**(f)** 49, 37, 25

**(g)** 165, 150, 135

**(h)** 120, 106, 92

Sixth Class – Teacher’s Resource Book – ANSWERS

**PAGE 153**

**1.**

**(a)** 17, 23, 30, 38

**(b)** 34, 46, 60, 76

**(c)** 18, 24, 31, 39

**(d)** 31, 25, 18, 10

**(e)** 48, 36, 22, 6

**(f)** 72, 61, 48, 33

**(g)** 50, 68, 89, 113

**(h)** 67, 91, 119, 151

**2.**

**(a)** 2·9, 3·1, 3·3, 3·5

**(b)** 5·5, 5·8, 6·1, 6·4

**(c)** 8·4, 8·9, 9·4, 9·9

**(d)** 11·0, 11·6, 12·2, 12·8

**(e)** 22·0, 23·2, 24·4, 25·6

**(f)** 35·7, 38·3, 40·9, 43·5

**(g)** 55·9, 59·2, 62·5, 65·8

**(h)** 79·2, 74·7, 70·2, 65·7

**3.**

**(a)** 32/48, 64/96, 128/192 256/384

**(b)** 16/64, 32/128, 64/256, 128/512

**(c)** 15/25, 18/30, 21/35, 24/40

**(d)** 15/10, 18/12, 21/14, 24/16

**(e)** 45/50, 54/60, 63/70, 72/80

**(f)** 35/45, 42/54, 49/63, 56/72

**(g)** 35/40, 42/48, 49/56, 56/64

**(h)** 30/55, 36/66, 42/77, 48/88

**4.**

**(a)** 39, 51

**(b)** 40, 48, 52

**(c)** 30, 36, 60

**(d)** 80, 72, 64

**(e)** 127, 123, 111

**(f)** 242, 236, 233

**(g)** 450, 465, 510

**(h)** 555, 537, 528

**(i)** 862, 848

**(j)** 960, 982

**Challenge:** (a) 14, 18, 17, 21

(b) 21, 17, 23, 19

(c) 22, 18, 21, 17

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**1.**

**(a)** 16

**(b)** 16

**(c)** 16

**(d)** 32

**(e)** 32

**(f)** 32

**(g)** 75

**(h)** 75

**(i)** 75

**(j)** 72

**(k)** 72

**(l)** 72

**2.**

**(a)** 43

**(b)** 25

**(c)** 8

**(d)** 6

**(e)** 12

**(f)** 28

**(g)** 30

**(h)** 50

**(i)** 27

**(j)** 37

**(k)** 107

**(l)** 111

**3.**

**(a)** 23

**(b)** 38

**(c)** 27

**(d)** 60

**(e)** 69

**(f)** 47

**(g)** 65

**(h)** 15

**(i)** 43

**(j)** 49

**(k)** 45

**(l)** 92

**4.**

**(a)** 21

**(b)** 12

**(c)** 35

**(d)** 56

**(e)** 66

**(f)** 189

**(g)** 175

**(h)** 112

**(i)** 69

**(j)** 276

**(k)** 210

**(l)** 132

**PAGE 155**

**1.**

**(a)** 27

**(b)** 4

**(c)** 6

**(d)** 44

**(e)** 1

**(f)** 24

**(g)** 16

**(h)** 10

**(i)** 6

**(j)** 12

**(k)** 16

**(l)** 6

**2.**

**(a)** 12

**(b)** 1

**(c)** 12

**(d)** 6

**(e)** 17

**(f)** 18

**(g)** 11

**(h)** 12

**(i)** 15

**3.**

**(a)** 147

**(b)** 54

**(c)** 36

**(d)** 71

**(e)** 22

**(f)** 27

**(g)** 49

**(h)** 26

**4.**

**(a)** 50

**(b)** 38

**(c)** 60

**(d)** 19

**(e)** 29

**(f)** 98·4

**(g)** 14

**(h)** 48

**(i)** 45·7

**(j)** 19·7

**(k)** 49

**(l)** 10

**(m)** 37·8

**(n)** 212

**(o)** 43

**(p)** 6

**5.** –, x, €1,000

**6.** ÷, x, –, €430

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**1.** €28 + €150 – (€20 x2) =

€138

**2.** €148 – (2 x €29) – 54 =

€36

**3.** €125 – €40 – €54 – €20

= €11

**4.** €196 – €15 + €20 – €48

–€29 = €124

**5.** 148 ÷ 4 x 3 – 36 = €75

**6.** 237 – 36 – 36 – 48 = €117

**7.** €460 – €48 – €48 –

(3 x €29) = €304

**8.** €580 – (3 x €20) –

(4 x €36) + €36 = €412

**9.**

**(a)** (€240 ÷ 20) = 12 t-shirts

**(b)** €180 ÷ 36 = 5 dresses

**10.** €600 – (8 x €29) –

(7 x €48) – €15 = €17

**11.** €300 – (€48 ÷ 5 x 4) x7 =

€31·20

**Challenge:** €370