WORKSHEET 1 DIRECTED NUMBERS AND NUMBER PLANE CHAPTER 12

WHICH CANDLE BURNS LONGER, A RED ONE OR A GREEN ONE?

1(a) List the numbers greater than 13 and less than 17
(b) Write down the multiples of 4 between 40 and 50

2 Write down the next two numbers on the number line.
(a) 3, 2, 1, 0, –1, ...
(b) –15, –10, –5, ...
(c) –10, –8, –6, ...

3 The temperature in Liverpool is 5^0. What would be the temperature be in Perisher Valley if it is 11^0 colder than Liverpool?

4 Which town had the coldest day and by how much?
Moss Vale 4^0 or Cooma -2^0

5 Tiger won the golf tournament by 2 strokes with his score of 11 under par. Vijay came second. What was his score?

6 Calculate:
(a) $-6 + 3$ (b) $-6 + (-3)$ (c) $-6 - (-3)$

7 (a) $-2 - 3 - 4 - 5$ (b) $(-10 + 10) + (12 - 12)$ (c) $0.24 - 0.46$

8 Find the missing number.
(a) $7 + \Delta = 0$ (b) $\Delta + (-5) = -11$ (c) $\Delta + (-14) = -3$.

9 Find the missing number.
(a) $(-6) + (-14) = \Delta$ (b) $(-12) - \Delta = -6$ (c) $8 + \Delta = -2$

10 In a game of indoor cricket (1 point for every run scored and 5 points are lost when a player gets out), find the total score for the situation when 6 runs are scored and 2 players are out.

11 Evaluate:
(a) $9 \times (-8)$ (b) $(-9) \times (-8)$ (c) $(-9) \times 0$

12 Evaluate:
(a) $(-9)^2$ (b) $(-1)^3 \times (-2)^2$ (c) $-(-2)^3$

13 Calculate the answer to the following:
(a) $48 \div (-12)$ (b) $-48 \div 12$ (c) $-48 \div (-12)$

14 Calculate the answer to the following:
(a) $18 \div (-9) \times (-2)$ (b) $-27 \div 3 + (-4) \times (-6)$

15 Simplify:

(a) $\frac{120}{-6}$ (b) $\frac{28-18}{10-15}$ (c) $\frac{4\times(-5)}{32\div(-8)}$

16 Use the order of operations to evaluate: $-3\times[14-2(-1-3)\div -4]$

17 The current in a river flows at the rate of 5 km/h. A boat with a speed of 20 km/h in still water travels upstream. How fast can the boat travel upstream?

18 Two numbers have a product of 72 and a sum of –17. Find the two numbers.

19 Two numbers have their quotient as –4 and their sum is –12. Find the two numbers.

20 Auckland (NZ) is 2 hours ahead of Sydney time and Perth is 3 hours behind Sydney. If it is 3 p.m. in Wellington, what is the time in Perth?

21 Fearless Fred the fisherman hooks a shark 25 metres below the surface and pulls it up 8 metres, the shark then dives down 5 metres.

(a) How far will Fred then have to pull the shark to get it up to the boat at sea level?

(b) How far will the shark have travelled altogether between the time it is hooked and the time it landed?

Answers:

B	B	E	E	H	H	H	I
–7 –6 11	–16 4	–6	–4	–3 –9 –3	–20 –6 –10	–36	–72 72 0

N	N	O	R	R	S	T	T
–14 0 –0.22	81 –4 8	9 under	–2, –3 0, 5 –4, –2	–4 –4 4	Cooma 6	14, 15, 16 44, 48	4 15

T	T	U	Y
–20 –2 5	10am	22m 35m	15

7	3	11	14	9	3	2		15	16	10	17		18	5	20	9		8	20	13	12

4	6	5	18	1	10	2

WORKSHEET 2 DIRECTED NUMBERS AND NUMBER PLANE-CHAPTER 12

WHAT DID THE STAMP SAY TO THE ENVELOPE?

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1 True or false?
(a) $6 < 7$ (b) $7 > 6$

2 True or false?(a) $-2 > -3$ (b) $-4 < -6$

3 Arrange in ascending order.
(a) –3, –2, –5, 0,
(b) 3, –3, 4, –4

4 Arrange these in descending order.
(a) –5, –9, –1, 0, 2 (b) –5, –2, 3, 0

5 Starting from a point Q 2km East of O, where will John be if he walked:
(a) 3km East (b) 2km West (c) 4km West (d) 4km East

6 Beth was 2 strokes over par whilst Phillipa was 2 strokes under par in a game of golf. What was the winning margin?

7 In the morning on the snowfields it was -4^0. By lunchtime it had risen 5 degrees. What was the temperature then?

8 Find the answers to these subtractions:
(a) 5 – (–2) (b) –2– (+5) (c) –2 – 9 (d) 11 – 18

9 Simplify:
(a) –6 + (–7) – 8 (b) 8 + (–8) + (–2) (c) 5 + (–5) +4 + (–4)

10 Simplify these expressions:
(a) –14 – (–2 + 3) (b) 15 + (–2 +.7) (c) (15 + (–2 – 7)

11 Simplify these expressions.
(a) (–1) ÷ (–1) ÷ (–1) (b) 480 ÷ 4 ÷ (–12) (c) (–4) ÷ (–2) ÷ 2

12 Simplify:
(a) $\frac{3}{4} \div -\frac{1}{8}$ (b) $-\frac{3}{4} \div -\frac{1}{8}$ (c) $0.4 \div -0.2$

13 Simplify the following fractions:
(a) $\frac{6-10}{4}$ (b) $\frac{-12-8}{-5}$ (c) $\frac{7-47}{6-36}$ (d) $\frac{-6-6}{24-12}$

14 Simplify the following fractions:
(a) $\frac{-4\times 6}{-12}$ (b) $\frac{49\div -7}{14\div -2}$ (c) $\frac{5\times -8}{-4\times -20}$

15 Two numbers have a product of 12 but their sum is – 7. What are the numbers?

16 200 boxes of glasses were incorrectly packed. Each box which should have contained 25 glasses was 3 short of this number. How did the number of glasses packed differ from what was intended?

17 The ASX index rose 27 points during the morning trade but fell back 32 points by the close of day. How much did the market fall overall?

18 Find the number midway between – 2.7 and – 2.8.

19 Which quadrants are the points?
(a) A (3, 4) (b) B (–3, –2) (c) C (2, –3) (d) D (–2, 3)

20 Draw separate number planes for the following. Plot the points on the number plane and then join the dots in the order given and name the shape of the figure drawn.
(a) (0, 0), (4, 0), (2, 4), (0, 0)
(b) (1, 0), (5, 0), (5, 3), (1, 3), (1, 0)

21 Join the dots and name the shape drawn.
(a) (0, 0), (4, 0), (4, 4), (0, 4), (0, 0)
(b)(0, 0), (7, 0), (9, 2), (2, 2,), (0, 0)

22 Draw separate number planes for the following. Plot the points and join the dots in the order given and name the shape of the figure drawn.
(a) (3, 0), (3, 3), (6, 3), (6, 0)
(b) (2, 1), (4, 1), (4, 6), (2, 6)

Answers:

A	A	C	C	D	E	E	G
5	Rectangle parallelogram	True true	1st, 3rd 4th, 2nd	–4, –3, 3, 4	4	Right triangle parallelogram	–1 4 $\frac{4}{3}$ –1

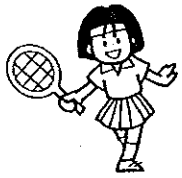
H	I	I	K	L	L	M	N	O
–1 –10 1	–6 6 –2	–2.75	5km East 0 3km West 6km East	2, 0, –1 –5, –9	3, 0, –2, –5	2 1 $-\frac{1}{2}$	–21 –2 0	7 –7 –11 –7

P	S	T	T	W	W	W
True false	–5, –3, –2, 0	–15 20 6	–3, –4	1	600	Rectangle rectangle

3a 10 12 19 5 22 18 15 11 14 20 17 9 3b 7 6

16 18 4a 4b 13 8 2 4 21 1 6 3a

WORKSHEET 3 DIRECTED NUMBERS AND NUMBER PLANE - –CHAPTER 12



WHY IS TENNIS SUCH A NOISY GAME?

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1 (a) List the numbers less than –2 and greater than –6.
(b) Write down the multiples of 4 between –13 and –3

2 Write these numbers in descending order.
–5, –3, –4, 0, 1

3 The temperature at Goulburn is 5^0 but the temperature is 7 degrees colder on the Snowy Mountains. What is the temperature in the mountains?

4 The temperature in Liverpool is 5^0. What would be the temperature be in Perisher Valley if it is 11^0 colder than Liverpool?

5 Greg won the golf tournament with his score of 11 under par. Vijay came second by 2 strokes, what was his score?

6 Calculate:
(a) $-6+3\times(-2)$ (b) $-6+(-9)\div 3$ (c) $-6-(-3)$

7 Calculate:
(a) $-2-1-4-7$ (b) $(-14+10)+(12-10)$ (c) $0.214-0.39$

8 Find the missing number.
(a) $-5+\Delta=0$ (b) $\Delta+(-3)=-5$ (c) $\Delta+(-7)=-3$.

9 In a game of indoor cricket (1 point for every run scored and 5 points are lost when a player gets out), find the total score for the situation when 8 runs are scored and 3 players are out.

10 Evaluate:
(a) $5\times(-4)$ (b) $(-5)\times(-4)$ (c) $(-5)^2$

11 Evaluate:
(a) $(-1)^3\times(-1)^2$ (b) $[2-3(4-2)]^2$

12 Simplify:
(a) $24\div(-6)$ (b) $-36\div 12$ (c) $-36\div(-12)$

13 Simplify these fractions.

(a) $\dfrac{40}{-8}$ (b) $\dfrac{16-8}{4-8}$ (c) $\dfrac{3\times-6}{36\div(-2)}$

14 Singapore's time is 5 hours behind Christchurch. If it is 2 p.m. in Christchurch, what is the time in Singapore?

15. Two numbers have their quotient as –2 and their sum is –9. Find the two numbers.

16 What quadrant are the following points in?
(a) (–3, 5), (b) (4, 1) (c) (–1, –1) (d) (3, –3)

17 Plot the following points on separate number planes and join up the dots in the given order. What shape have you drawn?
(a) (–3, –3), (–3, 3), (3, 3), (3, –3)
(b) (–3, 0), (0, 4), (3, 0)
(c) (1, 4), (1, 0), (–2, 0)

18 Plot the following points on separate number planes and join up the dots in the given order. What shape have you drawn?
(a) (0, 3), (3, 3), (5, 0), (2, 0)
(b) (2, 3), (4, 3), (4, –3), (2, –3)
(c) (0, 2), (2, 0), (0, –2), (–2, 0)

Answers:

A	A	B	C	E	E	E	I
–7	2nd, 1st 3rd, 4th	–12 –9 –3	–14 –2 –0.176	5 –2 4	–18 9	Parallelogram Rectangle square	–1 16

K	N	O	R	R	S	T	U
–6	– 5 – 2 1	–9	–2	Square Isosceles Triangle Right triangle	1, 0, –3, –4, –5	–5, –4, –3 –12, –8, –4	9am

V	Y
–4	–20
–3	20
3	25

6 8 7 9 14 2 15 18 12 8 3 10 5 13 15

17 9 11 2 18 2 16 3 16 7 4 8 1

Good work!
Check corrections!

WORKSHEET 1 DIRECTED NUMBERS AND NUMBER PLANE CHAPTER 12

WHICH CANDLE BURNS LONGER, A RED ONE OR A GREEN ONE?

1(a) List the numbers greater than 13 and less than 17 14, 15, 16
(b) Write down the multiples of 4 between 40 and 50 44, 48.

2 Write down the next two numbers on the number line.
(a) 3, 2, 1, 0, –1, ...-2... ✓
(b) –15, –10, –5, ...0... ✓
(c) –10, –8, –6, ...-4... ✓

3 The temperature in Liverpool is 5^0. What would be the temperature be in Perisher Valley if it is 11^0 colder than Liverpool? 5 − 11 = −6° ✓

4 Which town had the coldest day and by how much? Cooma ✓
Moss Vale 4^0 or Cooma -2^0 6°
4 − −2 = 6 ✓

5 Tiger won the golf tournament by 2 strokes with his score of 11 under par. Vijay came second. What was his score? 9 ✓

6 Calculate:
(a) –6 + 3 ✓ (b) –6 + (–3) −9 ✓ (c) –6 – (–3) −6+3 −3 ✓

7 (a) –2 –3 –4 –5 −3 −4 −5 −14 ✓ (b) (–10 + 10) + (12 – 12) 0 ✓ (c) 0.24 – 0.46 −0.22 ✓
0.24 − 0.46 = −0.22

8 Find the missing number.
(a) 7 + Δ = 0 −7 ✓ (b) Δ + (–5) = –11 −6 ✓ (c) Δ + (–14) = –3. 11 ✓

9 Find the missing number.
(a) (–6) + (–14) = Δ −20 ✓ (b) (–12) − Δ = –6 n = −8 ✗ −6 (c) 8 + Δ = –2 −10 ✗

10 In a game of indoor cricket (1 point for every run scored and 5 points are lost when a player gets out), find the total score for the situation when 6 runs are scored and 2 players are out. 6 − 10 = −4 ✓

11 Evaluate:
(a) 9 × (– 8) −72 ✓ (b) (– 9) × (– 8) 72 ✓ (c) (– 9) × 0 0 ✓

12 Evaluate:
(a) $(–9)^2$ 81 ✓ (b) $(–1)^3 \times (–2)^2$ −1 × 4 = −4 ✓ (c) $–(–2)^3$ 8 ✓

13 Calculate the answer to the following:
(a) 48 ÷ (–12) −4 ✓ (b) –48 ÷ 12 −4 ✓ (c) –48 ÷ (–12) 4 ✓

14 Calculate the answer to the following:
(a) 18 ÷ (–9) × (–2) Left to right
18
−2 × −2
= 4
(b) –27 ÷ 3 + (–4) × (–6)
−9 + 24 ✓
= 15 ✓

15 Simplify:

(a) $\frac{120}{-6}$ = −20 ✓ (b) $\frac{28-18}{10-15}$ = −2 ✓ (c) $\frac{4\times(-5)}{32\div(-8)}$ = 5 ✓

16 Use the order of operations to evaluate: $-3\times[14-2(-1-3)\div-4]$ ✗ Try again.

17 The current in a river flows at the rate of 5 km/h. A boat with a speed of 20 km/h in still water travels upstream. How fast can the boat travel upstream? 20 − 5 = 15 km/h ✓

18 Two numbers have a product of 72 and a sum of −17. Find the two numbers.

−9 + −8 = −17 −9 × −8 = 72 −9, −8 ✓

19 Two numbers have their quotient as −4 and their sum is −12. Find the two numbers.

−16, 4 ✓

20 Auckland (NZ) is 2 hours ahead of Sydney time and Perth is 3 hours behind Sydney. If it is 3 p.m. in Wellington, what is the time in Perth? 2pm 10am. Please ask me!

21 Fearless Fred the fisherman hooks a shark 25 metres below the surface and pulls it up 8 metres, the shark then dives down 5 metres.

(a) How far will Fred then have to pull the shark to get it up to the boat at sea level? 3m

(b) How far will the shark have travelled altogether between the time it is hooked and the time it landed?

Answers:

B	B	E	E	H	H	H	I
−7 −6 11	−16 4	−6	−4	−3 −9 −3	−20 −6 −10	−36	−72 72 0

N	N	O	R	R	S	T	T
−14 0 −0.22	81 −4 8	9 under	−2, −3 0, 5 −4, −2	−4 −4 4	Cooma 6	14, 15, 16 44, 48	4 15

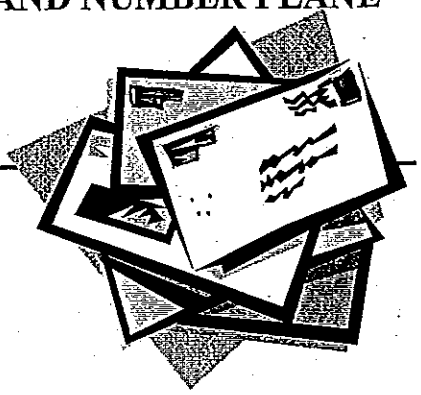
T	T	U	Y
−20 −2 5	10am	22m 35m	15

7 3 11 14 9 3 2 15 16 10 17 18 5 20 9 8 20 13 12

4 6 5 18 1 10 2

WORKSHEET 2 DIRECTED NUMBERS AND NUMBER PLANE- CHAPTER 12

WHAT DID THE STAMP SAY TO THE ENVELOPE?

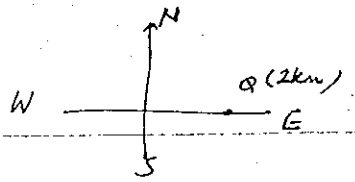


1 True or false?
(a) $6 < 7$ ~~True~~ (b) $7 > 6$ True ✓

2 True or false? (a) $-2 > -3$ True ✓ (b) $-4 < -6$ False ✓

3 Arrange in ascending order.
(a) $-3, -2, -5, 0$, $-5, -3, -2, 0$ ✓
(b) $3, -3, 4, -4$ $-4, -3, ~~3, 4, 5~~$ $3, 4$

4 Arrange these in descending order.
(a) $-5, -9, -1, 0, 2$ $2, 0, -1, -5, -9$ ✓ (b) $-5, -2, 3, 0$ $3, 0, -2, -5$ ✓



5 Starting from a point Q 2km East of O, where will John be if he walked:
(a) 3km East ~~5~~ 5km East ✓ (b) 2km West 0 ✓ (c) 4km West -2 km ✓ (d) 4km East 6 km ✓

6 Beth was 2 strokes over par whilst Phillipa was 2 strokes under par in a game of golf. What was the winning margin? Phillipa 4 strokes

7 In the morning on the snowfields it was -4^0. By lunchtime it had risen 5 degrees. What was the temperature then? $-4+5 = ~~-1~~$ 1^0C ✓

8 Find the answers to these subtractions:
(a) $5-(-2)$ $5+2=7$ ✓ (b) $-2-(+5)$ $-2-5$ $=-7$ ✓ (c) $-2-9$ -11 ✓ (d) $11-18$ -7 ✓

9 Simplify:
(a) $-6+(-7)-8$ $=-21$ ✓ (b) $8+(-8)+(-2)$ -2 ✓ (c) $5+(-5)+4+(-4)$ $0-4=+4-4$ 0 ✓

10 Simplify these expressions: $+5$
(a) $-14-(-2+3)$ $=-15$ (b) $15+(-2+7)$ 20 (c) $(15+(-2-7)$ -9 $15+-9$ $=6$ ✓

11 Simplify these expressions.
(a) $(-1) \div (-1) \div (-1)$ $=-1$ ✓ (b) $480 \div 4 \div (-12)$ $20 \div -12$ -10 ✓ (c) $(-4) \div (-2) \div 2$ $-4 \div -2$ $2 \div 2 = 1$ ✓

12 Simplify:
(a) $\frac{3}{4} \div -\frac{1}{8} = -6$ (b) $-\frac{3}{4} \div -\frac{1}{8} = (+)6$ $+$ (c) $0.4 \div -0.2$ ~~-0.2~~ -2 ✓

13 Simplify the following fractions:
(a) $\frac{6-10}{4} = -1$ ✓ (b) $\frac{-12-8}{-5} = 4$ ✓ (c) $\frac{7-47}{6-36} = \frac{-40}{-30} = \frac{4}{3} = 1\frac{1}{3}$ ✓ (d) $\frac{-6-6}{24-12} = \frac{-12}{12} = -1$ ✓

14 Simplify the following fractions:
(a) $\frac{-4 \times 6}{-12}$ $\frac{-24}{-12} = 2$ ✓ (b) $\frac{49 \div -7}{14 \div -2}$ -7 $= 1$ ✓ (c) $\frac{5 \times -8}{-4 \times -20}$ $= \frac{-40}{80} = -\frac{1}{2}$

15 Two numbers have a product of 12 but their sum is -7. What are the numbers?

$-4, -3$

16 200 boxes of glasses were incorrectly packed. Each box which should have contained 25 glasses was 3 short of this number. How did the number of glasses packed differ from what was intended? 600 ✓

17 The ASX index rose 27 points during the morning trade but fell back 32 points by the close of day. How much did the market fall overall? −5

18 Find the number midway between – 2.7 and – 2.8. ~~0.1~~ $\frac{-5.5}{2} = -2.75$

19 Which quadrants are the points?
(a) A (3, 4) (b) B (–3, –2) (c) C (2, –3) (d) D (–2, 3)

20 Draw separate number planes for the following. Plot the points on the number plane and then join the dots in the order given and name the shape of the figure drawn.
(a) (0, 0), (4, 0), (2, 4), (0, 0)
(b) (1, 0), (5, 0), (5, 3), (1, 3), (1, 0)

21 Join the dots and name the shape drawn.
(a) (0, 0), (4, 0), (4, 4), (0, 4), (0, 0)
(b)(0, 0), (7, 0), (9, 2), (2, 2,), (0, 0)

22 Draw separate number planes for the following. Plot the points and join the dots in the order given and name the shape of the figure drawn.
(a) (3, 0), (3, 3), (6, 3), (6, 0)
(b) (2, 1), (4, 1), (4, 6), (2, 6)

Answers:

A	A	C	C	D	E	E	G
5	Rectangle parallelogram	True true	1st, 3rd 4th, 2nd	–4, –3, 3, 4	4	Right triangle parallelogram	–1 4 $\frac{4}{3}$ –1

H	I	I	K	L	L	M	N	O
–1 –10 1	–6 6 –2	–2.75	5km East 0 3km West 6km East	2, 0, –1 –5, –9	3, 0, –2, –5	2 1 $-\frac{1}{2}$	–21 –2 0	7 –7 –11 –7

P	S	T	T	W	W	W
True false	–5, –3, –2, 0	–15 20 6	–3, –4	1	600	Rectangle rectangle

3a 10 12 19 5 22 18 15 11 14 20 17 9 3b 7 6

16 18 4a 4b 13 8 2 4 21 1 6 3a

WORKSHEET 3 DIRECTED NUMBERS AND NUMBER PLANE - –CHAPTER 12

WHY IS TENNIS SUCH A NOISY GAME?

Because it makes a ~~rag~~ racquet. ✓

1 (a) List the numbers less than –2 and greater than –6. -3, -4, -5 ✓
(b) Write down the multiples of 4 between –13 and –3 -12, -8, ✓

2 Write these numbers in descending order.
–5, –3, –4, 0, 1 1, 0, -3, -4, -5 ✓

3 The temperature at Goulburn is 5^0 but the temperature is 7 degrees colder on the Snowy Mountains. What is the temperature in the mountains?
5 - 7 = -2° ✓

4 The temperature in Liverpool is 5^0. What would be the temperature be in Perisher Valley if it is 11^0 colder than Liverpool? 5 - 11 = -6° ✓

5 Greg won the golf tournament with his score of 11 under par. Vijay came second by 2 strokes, what was his score?

6 Calculate:
(a) –6 + 3 × (–2) -12 ✓ (b) –6 + (–9) ÷ 3 -6-3 = -9 ✓ (c) –6 – (–3) -6+3 = -3 ✓

7 Calculate:
(a) –2 –1 –4 –7 -7-7 = -14 ✓ (b) (–14+ 10) + (12 –10) -4+2 = -2 ✓ (c) 0.214 – 0.39

8 Find the missing number.
(a) –5 + Δ = 0 Δ=5 ✓ (b) Δ + (–3) = –5 Δ= -2 ✓ (c) Δ + (–7) = –3. Δ=4 ✓

9 In a game of indoor cricket (1 point for every run scored and 5 points are lost when a player gets out), find the total score for the situation when 8 runs are scored and 3 players are out.
+8 - 15 = -7

10 Evaluate:
(a) 5 × (–4) -20 ✓ (b) (–5) × (–4) 20 ✓ (c) $(-5)^2$ 25 ✓ 2-3×2 = -4²

11 Evaluate:
(a) $(-1)^3 \times (-1)^2$ -1 × 1 = -1 ✓ (b) $[2 - 3(4 - 2)]^2$ 16 ✓

12 Simplify:
(a) 24 ÷ (–6) $\frac{24}{-6}$ = -4 ✓ (b) –36 ÷ 12 $\frac{-36}{12}$ = -3 ✓ (c) –36 ÷ (–12) $\frac{-36}{-12}$ = 3 ✓

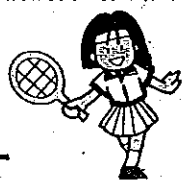
13 Simplify these fractions.
(a) $\frac{40}{-8}$ = $\frac{40}{-8}$ = -5 ✓ (b) $\frac{\cancel{16-8}\ 8}{4-\cancel{8}\ -4}$ = -2 ✓ (c) $\frac{3\times -6}{36\div(-2)}$ = 1 ✓

14 Singapore's time is 5 hours behind Christchurch. If it is 2 p.m. in Christchurch, what is the time in Singapore?
S = C - 5 10 11 12 1 2 pm $\frac{14}{5}$ = 9am ✓

15. Two numbers have their quotient as –2 and their sum is –9. Find the two numbers. -18, 9
$\frac{-18}{9}$ = -2 -18+9 = -9

Alison Chin

WORKSHEET 3 DIRECTED NUMBERS AND NUMBER PLANE - –CHAPTER 12



WHY IS TENNIS SUCH A NOISY GAME?

Because it makes a ~~rag~~ racquet. ✓

1 (a) List the numbers less than –2 and greater than –6. -3, -4, -5 ✓
(b) Write down the multiples of 4 between –13 and –3 -12, -8, ✓

2 Write these numbers in descending order.
–5, –3, –4, 0, 1 1, 0, -3, -4, -5 ✓

3 The temperature at Goulburn is 5^0 but the temperature is 7 degrees colder on the Snowy Mountains. What is the temperature in the mountains? ✓
5 - 7 = -2° ✓

4 The temperature in Liverpool is 5^0. What would be the temperature be in Perisher Valley if it is 11^0 colder than Liverpool? 5 - 11 = -6° ✓

5 Greg won the golf tournament with his score of 11 under par. Vijay came second by 2 strokes, what was his score?

6 Calculate:
(a) –6 + 3 × (–2) -12 ✓ (b) –6 + (–9) ÷ 3 -6-3 = -9 ✓ (c) –6 – (–3) -6+3 = -3 ✓

7 Calculate:
(a) –2 –1 –4 –7 -7-7 = -14 ✓ (b) (–14 + 10) + (12 – 10) -4+2 = -2 ✓ (c) 0.214 – 0.39

8 Find the missing number.
(a) –5 + Δ = 0 Δ=5 ✓ (b) Δ + (–3) = –5 Δ=-2 ✓ (c) Δ + (–7) = –3. Δ=4 ✓

9 In a game of indoor cricket (1 point for every run scored and 5 points are lost when a player gets out), find the total score for the situation when 8 runs are scored and 3 players are out.
+8 - 15 = -7

10 Evaluate:
(a) 5 × (–4) -20 ✓ (b) (–5) × (–4) 20 ✓ (c) $(-5)^2$ 25 ✓ 2-3×2 = -4²

11 Evaluate:
(a) $(-1)^3 \times (-1)^2$ -1 × 1 = -1 ✓ (b) $[2 - 3(4 - 2)]^2$ 16 ✓

12 Simplify:
(a) 24 ÷ (–6) $\frac{24}{-6}$ = -4 ✓ (b) –36 ÷ 12 $\frac{-36}{12}$ = -3 ✓ (c) –36 ÷ (–12) $\frac{-36}{-12}$ = 3 ✓

13 Simplify these fractions.
(a) $\frac{40}{-8}$ = $\frac{40}{-8}$ = -5 ✓ (b) $\frac{\cancel{16-8}\ 8}{4-\cancel{8}\ -4}$ = -2 ✓ (c) $\frac{3\times -6}{36\div(-2)}$ = 1 ✓

14 Singapore's time is 5 hours behind Christchurch. If it is 2 p.m. in Christchurch, what is the time in Singapore? 10 11 12 1 2pm
S = C - 5 $\frac{14}{5}$ = 9am ✓

15. Two numbers have their quotient as –2 and their sum is –9. Find the two numbers. -18, 9
$\frac{-18}{9}$ = -2 -18+9 = -9