Homework

Chapter 1: Integer

1A Whole number addition and subtraction, multiplication and division

1.

Expression	Answer
$(123 + 15) \times 9$	1242
$(78 + 24) \times 2$	204
$(24 + 36) \times 15$	900
$(77 - 10) \times 2$	134
$(48 - 18) \times 9$	270
$(45 - 25) \times 7$	140

2. 42 and 43

3. 23, 24, 25

4. 49 and 51

5. 23, 25 and 27

6. 38 and 39

7. 27, 28 and 29

8. 45 and 47

Homework

1B Number properties

1.

Pair of Numbers	LCM
4 and 6	12
7 and 21	21
9 and 15	45
10 and 25	50
12 and 18	36
16 and 24	48
20 and 30	60
14 and 35	70
6 and 9	18
15 and 45	45
3 and 7	21
11 and 22	22
8 and 20	40
9 and 12	36
15 and 24	120
7 and 10	70

2.

Pair of Numbers	HCF
12 and 18	6
15 and 25	5
14 and 28	14
10 and 20	10
8 and 12	4
30 and 45	15
16 and 40	8
27 and 36	9
22 and 44	22
32 and 48	16
50 and 75	25
9 and 27	9
21 and 35	7
14 and 21	7
24 and 36	12
35 and 70	35

3. 20

4. 90

5. 120

6. 9

7. 8

8. 7

9. Evaluate the following.

49	81	120	169
196	900	625	1600
3600	4900	10000	40000
6	8	12	9
14	15	17	19
21	27	25	10

10. Evaluate the following. Be careful with the negative numbers

9	16	100	144
900	1225	3025	3600
-25	-169	-225	-441
-900	-1764	-2500	-8100
-4	-12	-5	-6
-9	-10	-15	-14

Homework

1C Divisibility and prime factorisation

1. Use a factor tree to find the prime factor form of these numbers.

Number	Prime Factorization
144	$2^4 \times 3^2$
225	$3^2 \times 5^2$
420	$2^2 \times 3 \times 5 \times 7$
540	$2^2 \times 3^3 \times 5$
150	$2 \times 3 \times 5^2$
72	$2^3 \times 3^2$
315	$3^2 \times 5 \times 7$
500	$2^2 \times 5^3$

2.

Number	Prime Factorization	Different Primes
120	$2^3 \times 3 \times 5$	3 (2, 3, 5)
294	$2 \times 3 \times 7^2$	3 (2, 3, 7)
450	$2 \times 3^2 \times 5^2$	3 (2, 3, 5)
720	$2^4 \times 3^2 \times 5$	3 (2, 3, 5)
810	$2 \times 3^4 \times 5$	3 (2, 3, 5)
1000	$2^3 \times 5^3$	2 (2, 5)
1400	$2^3 \times 5^2 \times 7$	3 (2, 5, 7)
2310	$2 \times 3 \times 5 \times 7 \times 11$	5 (2, 3, 5, 7, 11)

3.

Number	Divisible by 2	Divisible by 3	Divisible by 4	Divisible by 5	Divisible by 6	Divisible by 8	Divisible by 9
144	Yes	Yes	Yes	No	Yes	Yes	Yes
225	No	Yes	No	Yes	No	No	Yes
275	No	No	No	Yes	No	No	No
320	Yes	No	Yes	Yes	No	Yes	No
432	Yes	Yes	Yes	No	Yes	Yes	Yes
567	No	Yes	No	No	No	No	Yes
640	Yes	No	Yes	Yes	No	Yes	No
729	No	Yes	No	No	No	No	Yes
882	Yes	Yes	Yes	No	Yes	No	Yes
1000	Yes	No	Yes	Yes	No	Yes	No
810	Yes	Yes	No	Yes	Yes	No	Yes
950	Yes	No	No	Yes	No	No	No

Homework

1D Negative integers

1.

Expression	Answer
$-2 + 5$	3
$-8 + 3$	-5
$-12 + 4$	-8
$-9 + 7$	-2
$-7 + 9$	2
$-3 + 10$	7
$-15 + 12$	-3
$-6 + 8$	2
$-11 + 5$	-6
$-13 + 11$	-2
$-4 + 13$	9
$-14 + 2$	-12
$-10 + 6$	-4
$-5 + 15$	10
$-16 + 3$	-13
$-20 + 9$	-11
$-18 + 8$	-10
$-21 + 4$	-17
$-7 + 14$	7
$-9 + 19$	10
$-17 + 2$	-15
$-22 + 11$	-11
$-13 + 7$	-6
$-12 + 10$	-2
$-23 + 5$	-18
$-15 + 16$	1
$-19 + 3$	-16
$-24 + 6$	-18

2.

Expression	Answer	Expression	Answer	Expression	Answer	Expression	Answer
$5-9$	-4	$8-13$	-5	$2-6$	-4	$7-11$	-4
$12-15$	-3	$3-10$	-7	$9-14$	-5	$11-18$	-7
$15-20$	-5	$6-8$	-2	$4-7$	-3	$1-5$	-4
$13-17$	-4	$10-16$	-6	$14-19$	-5	$18-22$	-4
$16-21$	-5	$20-25$	-5	$22-26$	-4	$24-29$	-5
$-2-5$	-7	$-3-8$	-11	$-6-9$	-15	$-7-12$	-19
$-4-10$	-14	$-5-11$	-16	$-8-14$	-22	$-13-19$	-32

Homework

1E Addition and subtraction of negative

1.

Expression	Answer	Expression	Answer	Expression	Answer	Expression	Answer
$8+(-3)$	5	$10+(-4)$	6	$12+(-7)$	5	$15+(-6)$	9
$18+(-9)$	9	$5+(-11)$	-6	$3+(-8)$	-5	$9+(-10)$	-1
$13+(-5)$	8	$20+(-15)$	5	$34+(-9)$	25	$25+(-14)$	11
$-4+(-3)$	-7	$-7+(-8)$	-15	$-10+(-12)$	-22	$-5+(-14)$	-19
$-6+(-9)$	-15	$-11+(-13)$	-24	$-2+(-16)$	-18	$-8+(-17)$	-25
$-14+(-18)$	-32	$-19+(-20)$	-39	$-15+(-9)$	-24	$-20+(-30)$	-50
$6+(-2)$	4	$8+(-5)$	3	$12+(-7)$	5	$9+(-4)$	5
$14+(-9)$	5	$3+(-8)$	-5	$7+(-3)$	4	$10+(-6)$	4
$13+(-5)$	8	$20+(-15)$	5	$-3+(-2)$	-5	$-6+(-1)$	-7
$-9+(-7)$	-16	$-5+(-4)$	-9	$-8+(-6)$	-14	$-11+(-10)$	-21
$-2+(-3)$	-5	$-7+(-5)$	-12	$-14+(-12)$	-26	$-16+(-13)$	-29
$-20+(-14)$	-34	$-22+(-16)$	-38	$-25+(-19)$	-44	$-28+(-21)$	-49
$-30+(-23)$	-53	$-33+(-25)$	-58	$-40+(-35)$	-75	$-44+(-49)$	-93

Homework
1F Multiplication and division of integers

1.

Expression	Answer	Expression	Answer	Expression	Answer	Expression	Answer
$3 \times (-4)$	-12	$7 \times (-8)$	-56	$5 \times (-6)$	-30	-2×9	-18
-3×10	-30	-4×7	-28	$6 \times (-11)$	-66	$8 \times (-12)$	-96
$9 \times (-13)$	-117	-5×14	-70	-6×15	-90	-7×16	-112
$10 \times (-2)$	-20	$12 \times (-3)$	-36	$15 \times (-4)$	-60	-8×17	-136
-9×18	-162	-10×19	-190	$20 \times (-5)$	-100	$25 \times (-6)$	-150
$30 \times (-7)$	-210	-11×21	-231	-13×22	-286	-14×23	-322
$2 \times (-8)$	-16	$4 \times (-9)$	-36	$6 \times (-10)$	-60	-12×24	-288
-15×25	-375	-18×26	-468	$35 \times (-3)$	-105	$40 \times (-2)$	-80
$45 \times (-1)$	-45	-20×5	-100	-25×6	-150	-30×7	-210
$50 \times (-4)$	-200	$55 \times (-5)$	-275	$60 \times (-6)$	-360	-17×27	-459
-19×28	-532	-21×29	-609	$70 \times (-8)$	-560	$75 \times (-9)$	-675
$80 \times (-10)$	-800	-22×30	-660	-24×31	-744	-26×32	-832
$85 \times (-11)$	-935	$90 \times (-12)$	-1080	$13 \times (-7)$	-91	-18×9	-162

2.

Expression	Answer	Expression	Answer	Expression	Answer	Expression	Answer
$-15 \div 3$	-5	$-24 \div 8$	-3	$-18 \div 6$	-3	$-36 \div 9$	-4
$-40 \div 5$	-8	$50 \div (-10)$	-5	$60 \div (-12)$	-5	$72 \div (-9)$	-8
$80 \div (-16)$	-5	$90 \div (-18)$	-5	$-30 \div 6$	-5	$-45 \div 15$	-3
$-60 \div 20$	-3	$-75 \div 25$	-3	$-90 \div 30$	-3	$100 \div (-25)$	-4

3.

Expression	Answer
$-6 \times 3 \div (-9) \times (-2)$	-4
$40 \div (-5) \times (-4) \div (-2)$	-16
$50 \div (-10) \times (-3) \div (-5)$	-3
$60 \div (-12) \times (-5) \div (-10)$	-2.5

4.

Expression	Answer
$5 \times (4 - 6) \div 2$	-5
$6 \div (-2 + 3) \times (-4)$	-24
$(-7 + 5) \times 3 \div (-2)$	3
$20 \div (10 - 5) \times 4$	16
$(3 \times (-2)) + (5 \div (-1))$	-11
$(-9 + 4) \times (2 - 3)$	5
$7 \times (6 + 3) + (-8 \times 2)$	47
$8 \div (-4) + (2 - 6)$	-6
$5 \times (3 - 7) \div (-4)$	5
$4 \times (3 - (-2)) + (-5)$	15
$(-7 + 4) \times (6 + (-3)) - 2$	-11
$10 \div (5 - (-3)) + 2$	3.25