

Gr 8. End of year 2013

Memo

Question 1:

- 1.1. C
- 1.2. C
- 1.3. A
- 1.4. D
- 1.5. C
- 1.6. B
- 1.7. C
- 1.8. A
- 1.9. D
- 1.10. C

(10)

1 for each

correct answer.

Question 2:

- 2.1. True
- 2.2. False
- 2.3. True
- 2.4. True
- 2.5. True
- 2.6. False
- 2.7. False
- 2.8. True
- 2.9. False
- 2.10. False

(10)

1 for each

correct answer

Question 3:

- 3.1. $5x - 2x = -12 - 3$
 $3x = -15$
 $x = -5$ (3)
- 3.2. $2x - 4 - 5x + 5 = 2x - 1$
 $2x - 5x - 2x = -1 - 5 + 4$
 $-5x = -2$
 $x = \frac{2}{5}$ (4)
- 3.3. hat no. be x
 $7x + 5 = 40$
 $7x = 35$
 $x = 5$ (3)

collecting like terms

simplifying

Answer

Brackets

like terms

simplify

Answer

Equation

simplify

Answer

Question 4:

- 4.1. $\sqrt{25} = 5$ (1)
- 4.2. $9(8) = 72$ (1)
- 4.3. $-7x^2 + 10x^3$ (2)

Answer

Answer

$-7x^2 + 10x^3$

4.4. $\frac{14a^2b}{7ab} + \frac{7ab^2}{7ab} - \frac{21a^2b^2}{7ab}$

= $2a + b - 3ab$ (3)

4.5. $\frac{3a}{3} - \frac{10a}{5}$

= $a - 2a = -a$ (3)

$2a$ ✓ b ✓

$-3ab$ ✓

Brackets ✓

Dividing ✓

Answer ✓

Question 5:

- 5.1. $A = 8$ $B = 10$
- $C = 10$ $D = 50$ (4)
- 5.2. $y = 2x$ (1)
- 5.3. $y = 2(37) = 74$ (1)

1 for each

correct answer

1 for correct ans

74.

Question 6:

- 6.1.1. 90 min & 84 min (2)
- 6.1.2. $\frac{5}{15} : \frac{1}{3}$
 $= \frac{5}{15} : \frac{1}{3}$
 $= 15 : 8$ (3)
- 6.3. $\frac{4}{3} \times 48 = 64$ (2)

84 mins

Answer.

improper

same denom

Answer.

fraction

Answer

Question 7:

- 7.1. $a = 90^\circ$ (ext \angle of Δ) (2)
- 7.2. $b = 62^\circ$ (cointerior \angle 's) (4)
- $c = 68^\circ$ (alternate \angle 's) (4)
- 7.3. $25^2 = x^2 + 24^2$ (Pythagoras)
 $49 = x^2$
 $7 = x$ (4)

$a = 90^\circ$ ✓ Reason

$b = 62^\circ$ ✓ Reason

$c = 68^\circ$ ✓ Reason

statement ✓ Reason

manipulation

answer.

6.2. $\frac{5}{8} \times 44,80 = R28.$ (2)

fraction

* below see below

28% 16,8

Question 8:

8.1.	2 3 5 3 0 4 5 7 7 8 4 1 2 3 3 8 9 5 0	(3)	✓ stem ✓ ✓ leaf.
8.2.	Mean = $\frac{575}{15}$ = 38,33	(3)	✓ total ✓ 15 ✓ answer
8.3.	37 and 43	(1)	✓ both answers
8.4.	Median = 38	(1)	✓ answer
8.5.	Range = 50 - 23 = 27	(1)	✓ answer

Question 9:

9.1.	$C = 2\pi r$ $= 2\pi(5)$ $= 31,42 \text{ cm}$	(3)	✓ formula ✓ substitution ✓ answer ✓ formula
9.2.	$A = \pi r^2$ $\sqrt{72} = \pi r^2$ $\sqrt{\frac{72}{\pi}} = r$ $r = 4,79$	(4)	✓ answer ✓ formula ✓ substitution ✓ manipulation
9.3.	$A_{(side)} = \frac{1}{2}(\pi r^2)$ $= \frac{1}{2}(\pi(-1)^2)$ $= 16,97 \text{ cm}^2$ $A_{(small)} = \frac{1}{2}(\pi r^2)$ $= \frac{1}{2}(\pi(3,5)^2)$ $= 19,24 \text{ cm}^2$ Area = 57,73 cm ² .	(7)	✓ answer ✓ formula ✓ substitution ✓ answer ✓ formula ✓ substitution ✓ answer ✓ answer

Question 10

10.1.	$V = \pi r^2 h$ $= \pi(2)^2(0,4)$ $= 503 \text{ m}^2$	(3)	✓ formula ✓ substitution ✓ answer
10.2.	$SA = \pi r^2 + 2\pi r h$ $= \pi(2)^2 + 2\pi(2)(0,4)$ $= 12,57 + 5,03$ $= 17,60$	(7)	✓ circle ✓ sides ✓ subs ✓ subs ✓ ans ✓ ans ✓ answer
10.3.	$17,6 \times 8,20$ $= 144,32$	(2)	✓ multiplying ✓ answer